

Grower acknowledges receipt of George's Broiler Grower Handbook. Grower also acknowledges that George's reserves the right to change the broiler program, as set forth in this Handbook, and all policies and procedures for implementation of the program.

Grower

Date

Serviceman



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INTRODUCTION

It is George's desire that this handbook will help communicate its programs, requirements, recommendations, and general intentions to the grower. By improving communications George's hopes to promote a cooperative spirit between the company and the grower, and to help both parties be successful in their endeavors to be very competitive in the production, processing and marketing of broilers.

George's has an open door policy. When a problem arises you should discuss it with your Serviceman. If your Serviceman cannot resolve the problem to your satisfaction, ask him to arrange a meeting with the Broiler Production Manager and/or the Live Production Manager. If they cannot resolve the problem to your satisfaction, you should feel free to ask them to arrange a meeting with the Executive Vice-President, President, or Chief Executive Officer.

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1. MANAGEMENT

GROWER MANAGEMENT IS CRITICAL TO A GROWER'S SUCCESS. The growers who spend the time and effort necessary to see that their flock has all its needs met are the ones who are usually at the top of the settlement when their flock is marketed. Those who don't work at it usually have their settlement determined by luck. Sometimes that's good, but most of the time it's not. Bringing together all the factors of production to produce high quality, low cost broilers is the job of grower management.

Seeing that the broilers are comfortable from the time of placement to the time of pick up is the top priority. This means feed, water, fresh air and comfortable temperatures are always easily available to the broilers and light is available to them on a scheduled basis. It also means that equipment adjustments are made on a timely basis to prevent any spillage or waste of feed and water.

Good management means adjustments to equipment, ventilation and temperature will be made when needed, not the next day or when it's really too late to make much difference. The weather can change very fast. Broilers that are too hot or too cold for only a short time can be stressed enough to get sick. Not turning chicks out to the next section of the house on time is very stressful. This can cause mortality and stunt the growth of birds.

Remember, broilers are absolutely dependent on the grower to provide all the necessities of life. The growers who see that their broilers' needs are met in a timely fashion are the ones who are most successful.

If you are disappointed in your settlements, one thing you must do is review your grower management. If you need help with this, George's Serviceman, Broiler Production Manager, and Live Production Manager are available to help.

2. THE IMPORTANCE OF THE FIRST TWO WEEKS

THE FIRST TWO WEEKS OF A CHICK'S LIFE ARE THE MOST CRITICAL. Many potentially good flocks are ruined during this period due to improper heat, ventilation and periods without feed and water. At no other time during the life of a flock is the grower's job more important.

Breeder hens pass on maternal antibodies to broiler chicks through the egg yolk to help protect them from disease until they are old enough to develop their own immune system. One thing that can prevent the baby chick from getting these antibodies is stress. Stress can result from conditions like hot or cold temperatures, wet floors, ammonia and lack of easy access to feed or water.

To decrease stress one of the most important things you can do is make sure the house is properly heated. (See Table A) Young chicks cannot regulate their own body temperature. Therefore, brooder stoves must work properly and be adjusted to warm the LITTER enough to make it feel warm and crisp to the touch.

Trying to brood chicks during any season of the year without lighting the brooder stoves causes stress. For example, from three a.m. to six a.m. on July and August mornings, chicks will huddle for warmth. This shows the house is too cool.

Proper watering is also very important in stress reduction. Nipple and cup waters must be adjusted so that water is easily available. Remember, water must be in the comfort zone where feed and the right temperature is also available.

Feed is another critical factor in controlling stress. It must also be in the comfort zone. George's program of flood-feeding makes an ample quantity of feed easily available to the baby chicks, provided the trenches and slopes are gentle enough for them to negotiate.

Extra care must be used in preparing the trenches and slopes so they are adequate to keep feed in and litter out. Yet the slopes must be gradual enough to allow easy access for the baby chick.

Special care must be taken to ensure that chicks do not go hungry, thirsty, get chilled or get too hot, especially during the first two weeks of life. Chicks usually do not recover from mistakes made at this time.

Table A

OPTIMUM BROODER & GROWING TEMPERATURE SCHEDULE	
AGE IN DAYS	°F
1-3	90°
4-7	87°
8-11	85°
12-15	83°
16-19	80°
20-24	77°
25-28	75°
29-32	72°
33-MKT	72°

3. CLEAN OUT AND SANITATION

- A. A complete clean out should occur at least once each year. This will require the removal of all litter from your poultry houses. Also, when condemnations exceed 2 percent, a clean-out is recommended. Dispose of litter in accordance with Best Management Practices, a copy of which is provided with the contract, and in accordance with all state regulations.**
- B. Take out caked litter after each flock or recondition to one-fourth inch particle size or less.**
- C. Wash and disinfect all inside surfaces of the house at clean-out.**
- D. Apply insecticide for beetle control at clean-out.**
- E. Use only disinfectants and insecticides approved by George's and FDA.**
- F. Place baits for rodent control, using only commercially available baits that have been approved by FDA.**
- G. Close doors so wild birds and animals cannot get in, but leave curtains open so the house will get as much fresh air and sunlight as possible between flocks.**
- H. Clean any caked feed out of feed bins. Spray inside of bins with a strong chlorine solution to control mold at clean-out.**
- I. When a complete clean-out is done, one load of litter per 4,000 square feet of floor space is required to give adequate litter depth. Rice hulls, shavings or sawdust can be used as litter.**
- J. When only caking-out between flocks is done, one truckload of rice hulls or one-half load of shavings per house is necessary in the one-third house brooding area only. One-half house brooding must be adjusted accordingly. Additional litter may be required in the remainder of the house, depending on the amount of cake removed.**

4. PREPARING FOR CHICKS AND BROODING

- A. All arrangements for brooding should be complete the day before chicks are due to arrive.
- B. Prepare feed trenches for flood feeding using extra care to make gradual slopes to the trenches. Make sure trenches are inside the water lines. (Refer to drawing on page 8-2)
- C. Cover trenches and slopes with good quality paper that will last one week.
- D. Let the feeders down and fill the trench and feed pans with feed the day before chicks arrive so the feed will be fresh and warm.
- E. Let the water lines down on the outside of the slopes, not on top of the slopes as this makes very poor access to the cups or nipples for the baby chicks. Fill the water lines with fresh water the day before chicks arrive so it will be warm. Set cup waters on the floor. Adjust nipple waters eye-level to the chicks so they can easily see them. Begin raising waterers when chicks are 3 to 4 days old. This will help keep the litter dry.
- F. Lower brooders to 36 inches (Infra-red to 48 to 60 inches) above the litter for every batch of chicks. In cool weather, light the brooders 24 hours (space heaters 48 hours) before chicks arrive so the house temperature will be stabilized and FLOOR TEMPERATURE is 90°. Make sure all brooders are working right and set thermostats at the right temperature. In warm weather, light some pilots and set thermostats on brooding temperature. Baby chicks need heat at night even in midsummer.

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- G. Set up 2 feet by 8 feet plywood partitions across houses at one-third or one-half house and always lower partition curtain so it is 3 inches above floor level behind the partition board. Even very small holes must be plugged to prevent baby chicks from getting through.
- H. Plug in one exhaust fan in the brood area and one in the off-brood end to run at the same time. This equalizes pressure on the partition curtain so it will stay in place. Set the timer to run these fans according to outside temperature and ammonia levels in the house. If you can smell ammonia, it's too much for baby chicks.
- I. Set the brooder thermostats at 90°, the exhaust fan thermostat at 93°, the house curtain machines at 95° in accordance with George's Temperature and Ventilation Guide. A copy is included in this Handbook. Your serviceman has copies for your house. Block the curtain machines so they only come down one foot. Set the overhead fan timer to run at least one minute out of ten to circulate warm air from the ceiling to the floor throughout the entire brood area. Open enough vent boards to provide adequate fresh air and a minimum static pressure of .05. Your serviceman can help you set this.
- J. Continuous light is required the first 3 days. Set lights to come on one hour before dark and go off one hour after daylight. (See Table B) Follow George's lighting program the remainder of the grow-out. A copy is included in this Handbook and additional copies are available from your serviceman. Restricted light programs help prevent Ascites (Water Belly) heart attacks, leg problems and should not have an adverse effect on bird weights and feed conversion when used correctly.
- K. Growers are expected to be present when chicks arrive. You can get an approximate arrival time by calling the hatchery at 1-800-800-4686 the day before delivery. Growers may help dump chicks and restack chick boxes. Growers may want to count chicks at this time. If so, 10 boxes of chicks should be counted and the total number of boxes delivered per house should also be counted to arrive at a good total count.

- L. Once all the chicks are dumped and empty boxes are removed, chick box pads should be removed from the houses as soon as possible as the baby chicks are attracted to them.
- M. Once chicks get settled in, or no later than one hour after delivery, go through and make any additional adjustments to equipment that are necessary for chick comfort. Make especially sure the waters are easily accessible at all points. The right temperature is very critical at this time. If ammonia fumes are present, increase the exhaust fan timer to remove them. Baby chick's eyes can be burned, causing blindness, with only 30-40 ppm of ammonia.
- N. Partial house brooding with flood-feeding and cup or nipple waterers have saved a great deal of labor for the grower. This system, however, concentrates the chicks into a small part of the house. This puts more pressure on the grower to insure that temperature and ventilation rates are closely monitored to keep the litter from getting wet, and therefore increasing the bacterial and ammonia levels in the brood area. George's grower's houses should be equipped with all the exhaust fans, circulation fans and brooder stoves necessary to keep the litter in good condition and ammonia levels below 25 ppm. We strongly urge you to use this equipment for this purpose.
- O. Brood the chicks for 5 to 7 days in the one-third house brooding area. At about 4 days of age you should decide whether to run more feed in the trenches or turn the chicks out to the next partition. If weather conditions permit, turn the chicks out to the next partition at 5 days. If it's especially cold during winter or it's due to turn very cold, hold off until 7 or 8 days, if necessary. Keep feed in the trenches at least seven days so all the chicks will have room to eat. Run more feed as needed by closing one drop hole at each pan. You must be careful to run the feeder manually and close drop holes as it fills the trenches.

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- P. Prepare the next area, one-half house, by letting down the partition curtain and the waterers and brooders the day before you let the chicks out. The floor must be 85° or the chicks will be reluctant to move into the area. Fill and flush the water lines also the day before to let it warm to house temperature.
- Q. Continue following George's Temperature and Ventilation Guide. Let chick comfort, litter conditions and ammonia determine your ventilation settings. Adjust the temperature down as the chicks' age in accordance with George's Temperature and Ventilation Guide.
- R. Turn chicks out into the full house at 12 to 14 days of age. If weather permits, turn them out at 12 days. If the weather is extremely cold or it's forecast to turn very cold, keep chicks in the one-half or two-thirds house area for up to 15 days. Prepare the remainder of the house by setting equipment temperature in accordance with George's Temperature and Ventilation Guide the day before chicks are turned out. The chicks will be very reluctant to move into the full house if the area and floor are cold. A cold area will be very stressful to them.

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5. WATERER ADJUSTMENT

During the brooding period cup waterers should be adjusted frequently so the lip of the cup is even with the back of the average chick. Keeping cup waterers adjusted will help prevent spillage and keep the chicks from getting litter in the cups. Nipple waterers should be raised when the chicks are 3 days of age so that the chicks raise their head to nearly the vertical position to trigger the nipple. This will help ensure that whatever water is released will go into the bird's mouth and not on the floor. Always make sure the birds do not have to jump to trigger the nipple. Waterers will need adjustment every day or two as the flock grows.

6. WATER QUALITY

Water is the most important nutrient we give chickens. Chickens should always be given water that is fit for human consumption. Over 70% of a broiler's weight is water. Water that is bacteria free encourages more consumption and therefore improves weights, feed conversion, and bird health. If performance is below standard for no apparent reason, a water sample should be sent to the Health Department, or George's Technical Service Center for analysis. Your serviceman can assist you in doing this.

The following guide is recommended for your use in keeping waterers clean:

GUIDE TO CLEANING WATER LINES

A regular cleaning program should be used to eliminate water line contaminants; including bacteria, sludge, drug residues and hard water deposit.

GENERAL CLEANING PROCEDURE:

1. Mix cleaning solution as indicated below.
2. Fill watering system with solution.
3. Allow solution to sit 1 to 3 hours.
4. Flush system with plain water using high pressure.
5. Check filters, valves and nipples for clogging from debris.
6. Adjust regulator pressure to normal operating pressure.

REGULAR MAINTENANCE:

Watering system should be cleaned one day every two weeks during production with one of the following:

Administration	Vinegar for alkaline water	Citric Acid for alkaline water	Ammonia for acid base water
Proportioner	64 fl. oz. white household vinegar + 64 fl. oz. water = 1 gal. of stock	1 pack 205 gm citric acid + 128 fl. oz. water = 1 gal. of stock	4 fl. oz. clear household ammonia + 124 fl. oz. water = 1 gal. of stock

BETWEEN FLOCKS:

Watering systems should be cleaned between flocks. A stronger cleaning solution can be used, since no birds will be drinking the water. It is important to thoroughly flush the system with plain water to prevent storing high concentrations of cleaning solution in the watering system until the next flock is placed.

Administration	Vinegar for alkaline water	Citric Acid for alkaline water	Ammonia for acid base water
Proportioner	128 fl. oz. white household vinegar = 1 gal. of stock	4 packs 205 gm citric acid + 128 fl. oz. water = 1 gal. of stock	16 fl. oz. clear household ammonia + 112 fl. oz. water = 1 gal. of stock

7. FEEDER ADJUSTMENT

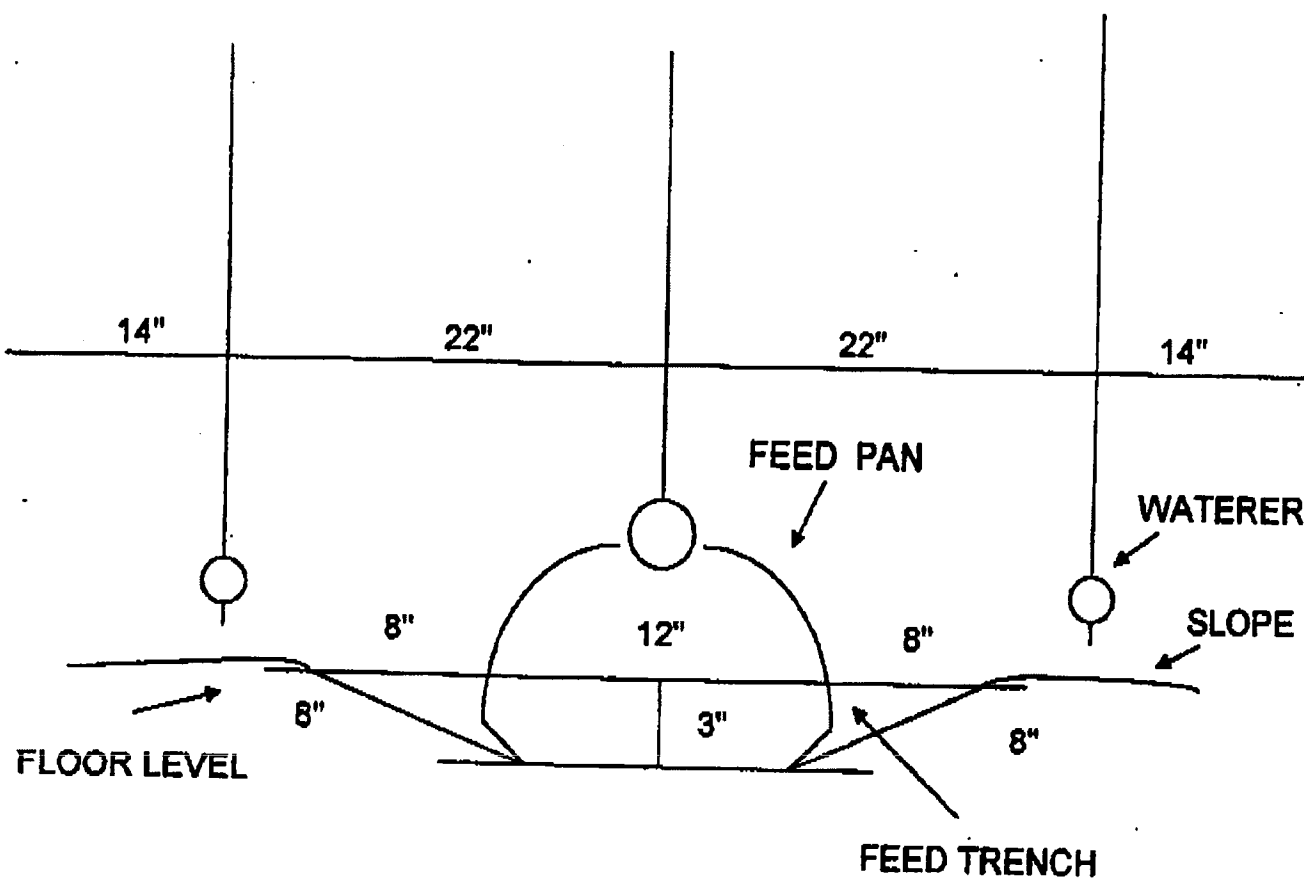
Once the chicks have eaten all the feed in the trenches, the feeder can be raised so that it barely clears the floor in the entire house. This will allow the chicks to move the pan enough to keep the feed flowing into it. As the birds grow keep the lip of the pan about even to one inch below the back of the average bird. Adjust the feeder pans to prevent any feed wastage. **EVEN THE SLIGHTEST AMOUNT OF FEED WASTAGE PER PAN WILL SEVERELY AFFECT FEED CONVERSION OVER THE LIFE OF THE FLOCK.**

8. WEIGHTS AND FEED CONVERSIONS

Feed makes up about 70 percent of the cost of growing broilers. Therefore close attention to everything that affects feed conversion is the best place to begin reducing your cost of production.

- A. Careful attention must be taken in building the trenches and slopes for flood feeding to insure that the feed does not spill out of the trenches into the litter, or litter gets into the trenches. (Refer to drawing on page 8-2)
- B. Feeder height adjustment is an important part of eliminating waste. The lip of the feeder pan should always be about even to one inch below the back of the average bird in the house.
- C. The depth of the feed in the pan should be adjusted so that no more than one-half inch of feed is in the bottom.
- D. If birds are eating only the pellets and leaving the mash, turn the feeder off daily and make the birds clean up the mash before running any more fresh feed.
- E. When a feed bin empties out, use a rubber hammer to knock loose any caked and moldy feed. Discard any moldy feed as it can be toxic to chickens.
- F. Keep feeders and augers in good operating repair. Repair leaks in auger tubes and pans immediately.
- G. Watch your feed supply closely to avoid running out. George's strives to provide timely feed delivery.
- H. Maintain house temperatures recommended by George's Temperature and Ventilation Guide. IF BROILERS ARE TOO COOL, THEY WILL EAT FEED TO MAINTAIN BODY HEAT. THIS HAS A SEVERE ADVERSE EFFECT ON FEED CONVERSION AND BIRD WEIGHTS. (See Table C.)
- I. HIGH AMMONIA LEVELS HAVE A SEVERE DAMAGING EFFECT ON BIRD WEIGHTS AND FEED CONVERSION AS SHOWN IN THE TABLE UNDER THE VENTILATION SECTION (See Table D.)

FLOOD FEED DESIGN 3 INCHES OF FEED IN TRENCH USING 6 FT PAPER



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Weights and Feed Conversions 8-2

9. VENTILATION - WINTER AND SUMMER

- A. George's Temperature and Ventilation Guide has detailed settings for exhaust fans, overhead fans, vent boards, and automatic curtain machines. The major objectives of this system are to:
1. Provide fresh air.
 2. Remove moisture.
 3. Remove harmful gases.
 4. Maintain house temperature.
- B. During the cooler and cold months when the curtains are closed, fresh air is brought into the house through vent openings by the exhaust fans. At the same time moisture and harmful gases are being removed.
- C. Set exhaust fan timers so that ammonia levels are maintained at acceptable levels. (Less than 25 ppm)
- D. Set exhaust fan thermostats so these fans will run continuously, if necessary to maintain house temperature, according to George's recommended guidelines.
- E. Set overhead fan timers to run at the same time exhaust fans run. This will help circulate incoming fresh air to all areas of the house. Run circulation fans as required to maintain proper litter moisture.
- F. Set circulation fan thermostats so these fans will run continuously if necessary to maintain house temperature.
- G. Set north and south curtain machine thermostats so the curtains will remain closed unless the house temperatures get 5° above George's recommended temperature. By keeping the curtains closed it will be easier to maintain a constant temperature and maintain negative pressure in the house when the exhaust fans are running. This insures equal ventilation in the entire house.

ALWAYS BE AWARE THAT THE ENTIRE HOUSE OF CHICKENS WILL SMOTHER IF THE CURTAINS ARE CLOSED AND THE EXHAUST FANS DO NOT RUN AS IN THE CASE OF A POWER FAILURE. THIS IS ESPECIALLY CRITICAL WHEN THE CHICKENS REACH THREE WEEKS OF AGE OR OLDER.

H. To avoid this;

1. Most George's houses are equipped with battery backup automatic curtain machines. However, you must make certain that the battery and the connections are good. Check the curtain machine routinely to make sure it is working properly.
2. If your houses are not equipped with battery backup machines, you need to equip it with these machines or install curtain drop devices that are activated when the power fails.
3. Never turn off exhaust fans. If the curtains close and you fail to turn them on, the birds could smother.

I. George's Temperature and Ventilation Guide recommends adjusting thermostat settings downward every 3 to 4 days of age. When you lower the brooder stove thermostat make sure you also lower the exhaust fans, overhead fans, and curtain machine thermostats at the same time. If this is not done, the house can rapidly get too hot.

J. Set curtain machine limit switches so the curtains will only open about one foot until the birds are two and one-half weeks old. This will prevent a temperature change that is too rapid for young chicks. At two and one-half weeks of age set the limit switches so the curtain will open completely especially on the south side in case of a power failure.

- K. Set negative pressure by opening the number of vent boards required for the number of exhaust fans being used. Your serviceman can help with this.
- L. Ventilation needs to be monitored periodically and adjustments made depending on outside weather conditions, inside house conditions and bird comfort.
- M. Maintaining house temperature is a must for optimum performance. After four weeks of age, house temperature should be maintained at 72°. The following table shows what could happen to feed conversion and bird weight at temperatures below 70°.

TABLE C

TEMPERATURE	AVG. WT.	FEED CONVERSION
70°	4.00	1.85
65°	3.98	1.92
60°	3.91	1.97

Ammonia levels also have a damaging effect on optimum performance. The following table shows what could happen to feed conversion and bird weight when you have high ammonia levels.

TABLE D

AMMONIA LEVELS	AVG. WT.	FEED CONV.	CONDEMN %	EYE ULCERS
0 PPM	4.00	1.85	.1	-
25 PPM	3.92	1.89	3.5	-
50 PPM	3.76	1.93	4.1	-
60 - 70 PPM	-	-	-	80 % in 6 hours (causing blindness)

Turning down ventilation in order to maintain house temperature (and save gas) increases ammonia levels. AS THE TABLES INDICATE, AMMONIA LEVELS ARE JUST AS DAMAGING TO OPTIMUM PERFORMANCE AS LOW TEMPERATURES. THE ABOVE TABLES ALSO INDICATE THE IMPORTANCE OF FRESH AIR AND PROPER TEMPERATURES.

VENTILATION - SUMMER - When the birds are three weeks old, overhead fans should be lowered so the bottom of the fan is 3 feet above the floor. All fans should blow the same direction as the prevailing wind. Generally the prevailing wind is out of the southwest in the summertime. Fogger lines and nozzles should be cleaned and ready for use. Fan and fogger thermostats should be set according to the following table: (Table E)

TABLE E

AGE (DAYS)	FAN THERMOSTAT	FOGGER THERMOSTAT
21 - 27	85° - 80°	95°
28 - 34	79° - 76°	95° - 90°
35 - MARKET	75° - 72°	90° - 85°

A list of many ideas for hot weather management is included in George's Hot Weather Management Table. A copy is included in this Handbook, or your serviceman can provide additional copies for your use.

HOT WEATHER WARNING!!

1. Lower fans by 3 weeks and set thermostats at approximately 80 degrees. Adjust your thermostats in accordance with the Table E.
2. The bottom of the fan should be about 3 feet from litter.
3. Fans should blow the same direction as the prevailing wind.
4. When operating, the fans should be level (parallel) to floor.
5. Fan maintenance is very important.
 - a. Keep screens clean, and in place (for safety).
 - b. Tighten or replace belts.
 - c. Replace bad motors.
 - d. Keep fan blades clean.
6. On very still, humid nights, you should have 3 or 4 fans synchronized on timers for a couple minutes to stir air.
7. Check fogger lines, pumps, filters, etc.
8. When cleaning fogger nozzles, use a nylon brush. Don't use wire brushes or drill bits. This destroys spray patterns and uses too much water.
9. Run at least 80 p.s.i. pressure on fogger lines.
10. Turn foggers on at approximately 85° , and off again when temperature drops below 85°.
11. Be sure all fans are on when running foggers.
12. Replace any fogger nozzles that spray an uneven pattern.
13. If a fogger tip is wetting a thermostat, or fan (causing dripping), it should be blocked off.
14. Wires going into fan motors must enter through the bottom of motor. If not, water will run down the wire into the motor, burning it out. Also cover plug-ins.
15. If a thermostat is in a line of spray, you may have to cover it.
16. Periodically brush off sidewall screens and door screens to allow for maximum air movement.
17. Keep out the afternoon sun. Hang burlap at the top of the door on west end. Hang burlap at top of west sidewall on North-South houses.
18. Walk through the birds and get them up on their feet when the temperature is above 90°
This will release the heat trapped under them.
19. Frequently cut grass and weeds around the chicken house.

20. When the outside temperature is 95° or higher, remove feed from the birds by 10:00 a.m. Put the feed down in the evening.
21. Try your best to maintain good litter conditions.
 - a. Keep waterers at the proper depth and height.
 - b. Remove floods immediately.
 - c. Replace faulty fogger nozzles.
 - d. Dump water in a bucket, then outside.
 - e. Run foggers no more than necessary.
 - f. Flush water lines to provide cool water.

10. LITTER MANAGEMENT

- A. One of the important keys to controlling disease is keeping litter at the ideal moisture level. Wet litter encourages the growth of bacteria and coccidiosis. Litter that is too dry and dusty will aid the spread of viruses by providing dust particles on which the virus can travel.
- B. Ideal litter moisture is about 25%. This produces a litter that is free of dust and will almost form a ball when a handful is squeezed together.
- C. If a "flood" occurs in the house, the wet spot should be removed from the house. Wet litter will burn chickens' feet and cause leg problems. New litter may be required.
- D. Proper management of the watering system, house temperature and ventilation are the primary factors involved in maintaining ideal litter conditions.
- E. The longer litter is used the greater the buildup of disease organisms. Completely clean out litter at least once per year. When condemnations are more than 2 percent, a complete clean-out and disinfectant procedure is recommended.

11. BIO-SECURITY

In order to control disease under intensive poultry production the following procedures should be in effect:

- A. Do not allow unauthorized visitors in the chicken house. Humans are the major source of spreading poultry disease. Require any visitors, including your serviceman, to wear disposable plastic boots or disinfected rubber boots.
- B. Remove dead birds from the house at least twice a day and dispose of them by composting or burning in an approved incinerator. Methods of dead bird disposal are regulated by the individual states. A copy of your state's regulations are included in this Handbook.
- C. Keep out wild birds such as sparrows and starlings as they are second to humans in spreading diseases.
- D. Do not keep yard chickens or game birds, including ostriches, emus, rheas, ducks, geese, parrots, etc., since all these species can carry diseases that are a threat to commercial chickens.
- E. Keep the area around the chicken house free of any debris, tall grass and weeds to control rodents as they are known to carry salmonella, and many more diseases. Rats will kill baby chicks. Both mice and rats will damage the poultry house insulation and curtains. Also rats and mice eat, waste, and ruin chicken feed. Experts estimate that one rat will eat, waste or contaminate 60 pounds of feed per year. The best time to eliminate them is between flocks. Use only approved rodenticide.
- F. When total condemnations exceed 2 percent, a complete clean-out and disinfectant procedure is recommended.

12. DISEASES AND MEDICATION

- A. Chicks are vaccinated for Newcastle and Bronchitis diseases at the hatchery. They are vaccinated for leukosis before they hatch at 18 or 19 days of incubation. This gives them a head start on developing immunity before they get to the chicken house. George's also provides a crew to vaccinate broilers in the house. This crew may require your help occasionally to spray or water vaccinate your birds. The grower is expected to be present. The crew has been trained in handling and administering vaccines by our veterinarian.

Many other diseases affect broilers including, coccidiosis, enteritis, dermatitis, botulism, spiking mortality, aspergillosis, omphalitis, and others.

Ascites (commonly called water belly) a disease of today's fast growing broilers, is best controlled by lighting programs in conjunction with temperature and ventilation management.

If you think your birds are sick, as indicated by mortality or appearance, let your serviceman know immediately. He is trained to diagnose most common diseases, and he can provide treatment medication for some of them.

George's also retains a state certified veterinarian who has many years of experience to help with the diagnoses and treatment of diseases.

In addition, George's Technical Services Center is fully equipped to help with the detection of several viruses, bacteria, and molds that cause poultry diseases.

- B. A definite diagnosis must be made or confirmed by George's before any medication is given.

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Diseases and Medication 12-1

- C. Only medications provided by George's will be given to broilers, this includes: vitamins, minerals, disinfectants and digestive acidifiers. This policy must be strictly adhered to since our broilers are randomly sampled by USDA for drug and pesticide residues. Broilers showing illegal residues will be condemned. If unapproved pesticide residues are found, the farm may be rendered unusable until the soil is replaced.
- D. Servicemen will provide all medications and advise growers on the correct usage. Servicemen will respond to emergency calls concerning sick flocks at any reasonable time.

13. CHICKS AND CHICK PLACEMENT

A. Chick Quality

Good chick quality is a basic ingredient of good broiler performance. George's purchases breeding stock from the major breeding companies in the United States. All breeding stock purchased by George's is certified disease free. These companies produce birds that are competitive overall in the important economic traits such as liveability, feed conversion, weight for age, egg production, hatchability, and disease resistance. George's monitors these traits continuously in an effort to evaluate and maintain competitive breeding stock.

Breeder flocks are blood tested on a routine basis to detect disease organisms that could affect broiler performance. The breeder flocks are also vaccinated to pass on immunity to the broiler chicks

Hatching egg quality is monitored for shell texture and cleanliness which can have an effect on chick quality.

Incubation is done under strict sanitary conditions in order to produce high quality chicks. On occasion some chicks may have aspergillosis or omphalitis. When these diseases are indicated and confirmed by laboratory tests, George's will give the grower a credit for the number of Chicks lost in excess of two (2) percent for the first two weeks.

B. How Chick Placements are Decided

Hatchery Personnel schedule broiler farms for chick placement. Farms are scheduled in rotation, based on projected pick-up dates. Occasionally, adjustments may be made to this schedule to accommodate the Grower or George's.

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Chicks and Chick Placement 13-1

Approximately 20% of all chicks hatched are from young breeder flocks. George's monitors the placement of these chicks in an effort to achieve even distribution to all growers.

On any hatch day, hatchery personnel will examine the chicks in the incubators to determine their proper pull time. George's attempts to keep chicks together from breeders of the same approximate age and breed.

After being "pulled", chicks are prepared for shipment. This preparation includes culling, counting, boxing and vaccinating for Newcastle/Bronchitis. Chicks are also vaccinated for Marek's Disease which may be administrated manually either with a subcutaneous injection at the base of the neck or a method where eggs are injected at 18 days of age.

Hatchery Personnel estimate the number of chicks to hatch from each breeder flock. This estimate is used to match house and farm size to the flocks when they are pulled. This procedure may result in a house or farm receiving more or less chicks than rated capacity. George's attempts to deliver full bus loads of chicks into the same general area.

Hatchery personnel work hard to hatch quality chicks for the growers. This benefits not only the growers but also the Company. All growers are invited to tour our hatchery, by appointment. You will see that it is our desire to always hatch and deliver quality chicks to all growers.

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Chicks and Chick Placement 13-2

14. FEED MILLING, WEIGHING AND DELIVERY

- A. Feed ingredient quality is the first step in producing a good feed. George's has established quality standards for all incoming ingredients. This includes such things as moisture content, mold toxins, foreign materials, insecticides, rancidity, bushel weights, and nutritional factors. Samples of ingredients are routinely submitted to the laboratory for evaluation.
- B. Feed formulas are prepared by nutritionists with extensive experience in the field of poultry feeding. These formulas are entered into the computer system at the feed mill. The computer controls the automated scales that add most of the ingredients as required by the formulas. If there is a problem with the amount, flow, or addition of any ingredient, the system will automatically shut down until the problem is remedied. Samples of finished feed are routinely submitted to the laboratory for evaluation.
- C. The feed is then placed into preassigned load-out bins by feed type. Care is taken to be sure that feeds of different types are not mixed. Bins are checked periodically to be sure that they are clean and feed has not built up in them.
- D. Before the feed is loaded onto a feed truck, the feed truck is weighed while empty on platform scales. This weight is considered the "tare weight." At this point, the truck is loaded and weighed. This weight is considered the "gross weight." The difference between the gross weight and the tare weight is the "net weight," which is the amount of feed charged to the grower. Sometimes it is necessary to deliver split loads. On split loads, the gross weight for the first farm's load will be the tare weight of the next farm's load. Truck bin numbers are recorded showing which feed is in each bin. This feed is then delivered to the farm as scheduled by George's personnel.

- E. George's growers are responsible for calling in their inventory in each feed bin. This inventory is important in order for George's to properly schedule your feed.
- F. George's feed mill scales are checked regularly by a scale service company to assure accuracy.
- G. Whenever a farm cannot hold all feed delivered, the remainder of the feed is returned to the mill and weighed. After the gross weight is determined, the feed is unloaded. The truck is re-weighed to determine the tare weight. The tare weight of the load is subtracted from the gross weight to determine the net weight of feed returned. This amount of feed is credited to the farm account.
- H. At the end of each flock, feed will be ordered in an effort to have an adequate, but not excessive, amount of feed remaining at each house on the farm. This allows the reclaim truck to quickly pick up any feed remaining in farm bins so that all farm accounts can be promptly settled.
- I. If you should get feed delivered that you think is less than what the ticket states, please contact the feed mill or your serviceman immediately. Do not use any of the feed if at all possible. George's will promptly respond, and when necessary to resolve your concern, reweigh the feed.
- J. Due to unforeseen circumstances there may be times when you run out of feed. For example, weather conditions, road conditions, mechanical problems, etc. may prevent George's from making timely delivery of feed to your farm. However, George's makes every effort to minimize these occurrences.
- K. George's growers are welcome to observe their feed being weighed. Arrangements should be made through your serviceman.

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Feed Milling, Weighing and Delivery 14-2

15. RECORD KEEPING

- A. Keep accurate mortality records on the card provided. This is essential in tracking any disease processes occurring in the flock. Some growers record daily mortality and culls removed. This is also very helpful to a serviceman who may be trying to diagnose a disease problem.
- B. Total mortality for the life of the flock is used to determine how much live-haul equipment will be required to haul the flock to processing. It is also used in computing estimated live weight of the flock. Total mortality recorded on the card plus an estimate of the mortality from the serviceman's last visit to the date of pick-up is the figure used in your settlement.
- C. Mortality recorded at the time of the serviceman's last visit will be used to calculate your head count. The mortality incurred between the serviceman's last visit and the date your chickens are picked up will be estimated based on the average of the 3 days mortality prior to the serviceman's last visit. In case of abnormal mortality; heat loss, sickness, etc. during the last few days, the grower should notify the serviceman of the actual mortality.

16. CATCHING, CATCHING SCHEDULES AND WEIGHING PROCEDURES

A. Feed and Water Withdrawal

The grower will be notified in advance of the date and time broilers are scheduled for loading. At that time the grower will be given instructions about feed and water withdrawal procedures. It is important that these instructions are carefully followed. Your failure to follow these instructions may result in higher contamination at the processing plant. U.S.D.A. regulations concerning contamination are very strict and will become more strict in the future, since new methods of contamination detection have become law.

B. Catching

Catching chickens is a physically demanding job. Each crew has from five to ten people and catches about 40,000 birds. But, even as demanding as the job is, the catchers are still expected to handle the birds as carefully as possible under the conditions to minimize any problems that may occur.

George's respects and appreciates your concern for the birds you have spent your time and effort in growing. We share the same concerns and are constantly trying to improve our catching methods. If you have a problem with the way your chickens are caught, please contact your serviceman or the live haul manager as soon as possible.

Remember, respect usually gets respect. A little kindness will go a long way with the people who do this difficult job.

C. **Catching Schedules**

There are several considerations that have to be taken into account when catching times are assigned. The most important consideration is George's projected bird weight and not bird age. Other considerations that affect catching times are plant start-up times, farm location and it's proximity to other birds being picked up the same day or night, number of catch crews available, number of catchers on each crew, number of forklifts, travel time for trucks and catchers between farms, travel time for trucks to and from the plant, feed withdrawal time and road and weather conditions. Unfortunately, when all of these things are considered, there are always going to be birds that have to be picked up at inconvenient times. Circumstances may require that your assigned catching time be changed. George's monitors the rotation of catch times so your farm is not caught at the same time all the time.

D. **Birds Killed During Loading**

The grower is given credit for birds that are killed during the catching process or birds that die on the way to the plant. The grower should walk through the house with the crew foreman before catching begins to pickup any dead birds. After that any dead birds will be the responsibility of the crew, and will be loaded in the cages or on the loader truck for proper credit. This is done by either putting those dead birds in a cage so they will be weighed with the live chickens, or indicating the number of birds killed and multiplying that times the average weight. The result is then added into the total weight of the flock. The crew foreman will leave a loading report indicating the number of dead birds loaded on the loader truck. If a few live birds are inadvertently left on the farm, you will need to dispose of them to prevent disease from being carried to the next flock.

If the grower believes that smothered birds were left on the farm, the grower must contact their company service man or live haul manager no later than 24 hours from the catch time. Where smothered birds have been determined to have been left on the farm, and an accurate count has been verified, a credit memorandum will be issued to the grower's account.

E. Weighing Procedure

Prior to departure of the truck to the farm the truck is weighed. After the scale is "zero balance", the driver pulls onto the scales and gets out of the truck to confirm that it is in the proper position for weighing.

The weighmaster records the weight on the scale ticket by inserting the ticket in the printer and pressing "PRINT". This is the tare weight. The driver enters the truck and departs for the farm.

As the loaded truck arrives back at the plant, the scale is "zero balanced". The truck pulls on to the scales. The driver gets out of the truck to confirm that it is in the proper position for weighing. The weighmaster records the weight on the scale ticket by inserting the ticket in the printer and pressing "PRINT". This is the gross weight.

The weight of chickens is determined using the following formula: Gross weight minus the tare weight plus the fuel weight (2 lbs per mile) equals the net weight.

F. George's growers are welcome to observe their chickens being weighed. Arrangements should be made through your serviceman.

17. HOW GROWER PAY IS CALCULATED:

GEORGE'S FARMS INC.
Grower Pay Calculation Example
Grower Cost Less Than Middle Grower Cost

Settlement Data

Head Picked Up	20,115
Live Weight Gross	73,567
Average Live Weight	3.66
Total Lbs. Condemned (See below and example on page 17-3)	728
Lbs. To Pay For	72,839

Lbs. Condemned Calculation

Whole Bird Condemned (Head)	77	
Average Live Weight	3.66	
Total Lbs. Whole Bird Condemned (77 x 3.66)		282
Lbs. Parts From USDA Certificate	624	
One-half (½) of Parts Lbs.	312	
Convert Parts To Live Weight ÷ .70%		446
Total Condemned Lbs. (Whole Birds plus Parts)		728

Settlement Cost Information

Item Description	Total Cost	Lbs. To Pay For	Cost Per Lb.
Feed (140,660 x .10)	\$14,066.00 ÷	72,839 =	\$0.19311
Chicks (20,610 X .1380)	\$ 2,844.18 ÷	72,839 =	\$0.03905
Vaccine & Medication	\$ 4.00 ÷	72,839 =	\$0.00005
Your Total Cost	\$16,914.18 ÷	72,839 =	\$0.23221
Middle Grower Cost			\$0.23793
Your Difference Better (lower) than Middle grower cost (.00572 x 100%)			\$0.00572
Plus Middle Grower Pay Per Pound			\$0.04150
Equals Your Pay Per Pound			\$0.04722
Dollars (72,839 x .04722)			\$3,439.46
Total Pay For Settlement			\$3,439.46

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GEORGES FARMS INC.
Grower Pay Calculation Example
Grower Cost More Than Middle Grower Cost

Settlement Data

Head Picked Up	20,115
Live Weight Gross	73,567
Average Live Weight	3.66
Total Lbs. Condemned (See below and example on page 17-3)	728
Lbs. To Pay For	72,839

Lbs. Condemned Calculation

Whole Bird Condemned (Head)	77	
Average Live Weight	3.66	
Total Lbs. Whole Bird Condemned (77 x 3.66)		282
Lbs. Parts From USDA Certificate	624	
One-half (½) of Parts Lbs.	312	
Convert Parts To Live Weight + .70%		<u>446</u>
Total Condemned Lbs. (Whole Birds plus Parts)		728

Settlement Cost Information

Item Description	Total Cost	Lbs. To Pay For	Cost Per Lb.
Feed (140,660 x .10)	\$14,066.00 ÷	72,839 =	\$0.19311
Chicks (20,610 X .1380)	\$ 2,844.18 ÷	72,839 =	\$0.03905
Vaccine & Medication	\$ 4.00 ÷	72,839 =	\$0.00005
Your Total Cost	\$16,914.18 ÷	72,839 =	\$0.23221
Middle Grower Cost			\$0.22649
Your Difference higher than Middle grower cost (.00572 x 50%)			-\$0.00286
Middle Grower Pay Per Pound			\$0.04150
Equals Your Pay Per Pound			\$0.03864
Dollars (72,839 x .03864)			\$2,814.50
Total Pay For Settlement			\$2,814.50

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How Grower Pay Is Calculated? 17-2

- (A) Total head in lot.
- (B) Whole birds times average live weight charged to the grower
- (C) Parts condemned One half charged to grower divided by 70 to convert to live weight

U.S. DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
INSPECTION OPERATIONS
POULTRY CONDEMNATION CERTIFICATE

DISTRIBUTION: Original and first copy to Plant Management, one copy to Grower, and one copy to Establishment file.

DATE INSPECTED 7-25-96	PLANT NO. 13369	CLASS OF POULTRY YOUNG CHICKENS	NO. HEAD IN LOT 20115 ^(A)	LOT NO(S). (As stated by plant management) 3-N
ANTE-MORTEM INSPECTION POST-MORTEM INSPECTION			NO. HEAD ON ARRIVAL - (If any)	CONDEMNED ON ANTE-MORTEM INSPECTION
			100	TOTAL WEIGHT - (If available based on antemortem)
			CONDEMNED ON POST-MORTEM INSPECTION	
			NO. HEAD CONDEMNED 123	CARCASSES WITH - 450 Lb. PARTS - 624 ^(C)
CONDEMNATION CAUSE	NO. HEAD CONDEMNED	CONDEMNATION CAUSE	NO. HEAD CONDEMNED	CONDEMNATION CAUSE
Tuberculosis	(B) 4	Tumors	(B) 3	Oversized
Leukosis	(B) 4	Druses	(B) 2	Alaracutitis
Septicemia and Toxemia	(B) 39	Calluses	22	Others: (Specify) I.P.
Synovitis	(B) 1	Contamination	24	PLANT REFUSES
				3

REMARKS: The condition affecting this lot of poultry was characterized by the following gross lesions:



THIS CERTIFIES that the poultry described herein has been inspected and condemned in compliance with the Regulation Governing the Inspection of Poultry and Poultry Products (7 CFR Part 81) issued pursuant to the Poultry Product Inspection Act (21 U.S.C. 451 et seq.).

*Weights and counts were derived from information furnished and certified by plant management.

SIGNATURE OF AUTHORIZED PLANT OFFICIAL

SIGNATURE OF INSPECTION IN CHARGE

FSIS FORM 0001-2 (0/92) REPLACES FSIS FORM 0001-2 (4/87), WHICH MAY BE USED UNTIL EXHAUSTED.

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How Grower Pay Is Calculated? 17-3

18: GEORGE'S GROWER PERFORMANCE REQUIREMENTS**GEORGE'S POLICY AND PROCEDURE
FOR UNSATISFACTORY GROWER PERFORMANCE FOR SMALL BROILERS**

Your contract to grow "small broilers" (broilers that weigh less than five (5) pounds) is competitive. This means that each time you settle, you are competing with all other growers that settle small broilers during that same week.

Grower performance is determined by flock cost. The flock cost of each grower that settles small broilers during the same week is calculated and ranked by account beginning with the lowest flock cost and ending with the highest flock cost. Following each of your settlements, you receive a copy of the week's settlement ranking comparing your flock cost by account with the flock cost of all other growers that settle small broilers during that same week. If the weighted average flock cost of your combined accounts under the same small broiler contract is \$.0100 or more higher than the middle grower's flock cost, then your single flock performance is unsatisfactory.

Example 1 Grower A has one account

	Head Sold	Avg. Wt.	Total Weight	Diff. From Middle Grower (Avg. Of Combined Accts)
Account 1	40,000	4.00	160,000	+\$0.0050

Grower A's single flock performance is \$.0050 higher than middle, which is less than \$.0100. Therefore this single flock performance is satisfactory.

Example 2 Grower B has two accounts

	Head Sold	Avg. Wt.	Total Weight	Diff. from Mid. Grower (Avg. of Comb. Acct.)	Dollar Difference
Account 1	80,000	4.00	320,000	+\$0.0075	+\$ 2,400.00
Account 2	60,000	4.00	240,000	+\$0.0025	+ 600.00
Totals	140,000	4.00	560,000	+\$0.0054	+\$ 3,000.00

Grower B's single flock performance is \$.0054 higher than middle, which is less than \$.0100. Therefore this single flock performance is satisfactory.

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Example 3**Grower C has two accounts**

	Head Sold	Avg. Wt.	Total Weight	Diff. from Mid. Grower (Avg. of Comb. Acct)	Dollar Difference
Account 1	80,000	4.00	320,000	+ \$0.0200	+\$ 6,400.00
Account 2	60,000	4.00	240,000	- \$0.0010	- 240.00
Totals	140,000	4.00	560,000	+ \$0.0110	\$ 6,160.00

Grower C's single flock performance is \$.0110 higher than middle, which is more than \$.0100. Therefore this single flock performance is **unsatisfactory**.

Your six flock performance is determined by taking the average of the lowest difference from middle grower cost for five (5) of your last six (6) single flock performances for your combined accounts. If this calculated average is .0100 higher than the middle grower's costs, then your six flock performance is **unsatisfactory**.

Example 1:**Grower A Six Flock Performance**

Single Flock Performance
(Diff. From middle grower
Avg. Of combined accts)

Settlement #1:	+\$0.0150* (Not included in six flock average)
Settlement #2:	- 0.0100
Settlement #3:	+ 0.0075
Settlement #4:	+ 0.0050
Settlement #5:	+ 0.0085
Settlement #6:	<u>+ 0.0065</u>
Average	+ 0.0035

Explanation: Grower A's best five out of six flock performance is \$.0035 higher than middle, which is less than \$.0100. Therefore this six flock performance is **satisfactory**.

Example 2:**Grower B Six Flock Performance**

Single Flock Performance
(Diff. From middle grower
avg. of combined accts)

Settlement #1:	+\$0.0150
Settlement #2:	+ 0.0100
Settlement #3:	+ 0.0125
Settlement #4:	+ 0.0090
Settlement #5:	+ 0.0300* (Not included in six flock average)
Settlement #6:	<u>+ 0.0150</u>
Average	+ 0.0123

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Explanation: Grower B's best five out of six flock performance is \$.0123 higher than middle, which is more than \$.0100 therefore this six flock performance is unsatisfactory.

If your six flock performance is unsatisfactory, you will receive a letter from George's stating you are on probation. Your probationary period will extend for at least two (2) flocks. During this probationary period, your layout time between flocks may be increased and your density may be reduced to try and improve your performance.

If your two probationary flocks improve your six flock performance to satisfactory, your probation will end. If your cost is no higher than middle grower flock cost for the average of the two probationary flocks, but your six flock performance does not improve to satisfactory, you will continue to receive probationary flocks, so long as your average probationary flock cost is no higher than middle grower flock cost. At any time following your first two probationary flocks, your average probationary flock cost becomes higher than middle grower flock cost, and your six flock performance remains unsatisfactory, your broiler growing contract will be terminated.

IN ADDITION TO THE ABOVE GEORGE'S POLICY AND PROCEDURE FOR UNSATISFACTORY GROWER PERFORMANCE, GEORGE'S SPECIFICALLY RESERVES ALL RIGHTS TO TERMINATE YOUR BROILER GROWING CONTRACT AT ANY TIME, INCLUDING THE PROBATIONARY PERIOD, FOR ANY OTHER PROVISIONS AS STATED IN THE BROILER GROWING CONTRACT.

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GEORGE'S POLICY AND PROCEDURE
FOR UNSATISFACTORY GROWER PERFORMANCE FOR LARGE BROILERS

Your contract to grow "large broilers" (broilers that weigh five (5) pounds or more) is competitive. This means that each time you settle, you are competing with all other growers that settle large broilers during that same week.

Grower performance is determined by flock cost. The flock cost of each grower that settles large broilers during the same week is calculated and ranked by account beginning with the lowest flock cost and ending with the highest flock cost. Following each of your settlements, you receive a copy of the week's settlement ranking comparing your flock cost by account with the flock cost of all other growers that settle large broilers during that same week. If the weighted average flock cost of your combined accounts under the same large broiler contract is \$.0200 or more higher than the middle grower's flock cost, then your single flock performance is unsatisfactory.

Example 1 **Grower A has one account**

	Head Sold	Avg. Wt.	Total Weight	Diff. From Middle Grower (Avg. Of Combined Accts)
Account 1	40,000	6.00	240,000	+\$0.0150

Grower A's single flock performance is \$.0150 higher than middle, which is less than \$.0200. Therefore this single flock performance is satisfactory.

Example 2 **Grower B has two accounts**

	Head Sold	Avg. Wt.	Total Weight	Diff. from Mid. Grower (Avg. of Comb. Acct.)	Dollar Difference
Account 1	80,000	6.00	480,000	+\$0.0175	+\$ 8,400.00
Account 2	60,000	6.00	360,000	+\$0.0125	+ 4,500.00
Totals	140,000	6.00	840,000	+\$0.0154	+\$12,900.00

Grower B's single flock performance is \$.0154 higher than middle, which is less than \$.0200. Therefore this single flock performance is satisfactory.

Example 3**Grower C has two accounts**

	Head Sold	Avg. Wt.	Total Weight	Diff. from Mid. Grower (Avg. of Comb. Acct)	Dollar Difference
Account 1	80,000	6.00	480,000	+\$0.0401	+\$19,248.00
Account 2	60,000	6.00	360,000	-\$0.0010	- 360.00
Totals	140,000	6.00	840,000	+\$0.0225	\$18,888.00

Grower C's single flock performance is \$.0225 higher than middle, which is more than \$.0200. Therefore this single flock performance is unsatisfactory.

Your six flock performance is determined by taking the average of the lowest difference from middle grower cost for five (5) of your last six (6) single flock performances for your combined accounts. If this calculated average is .0200 higher than the middle grower's costs, then your six flock performance is unsatisfactory.

Example 1:**Grower A Six Flock Performance****Single Flock Performance**

(Diff. From middle grower
Avg. Of combined accts)

Settlement #1:	+\$0.0250* (Not included in six flock average)
Settlement #2:	- 0.0200
Settlement #3:	+ 0.0175
Settlement #4:	+ 0.0150
Settlement #5:	+ 0.0185
Settlement #6:	<u>+ 0.0165</u>
Average	+ 0.0095

Explanation: Grower A's best five out of six flock performance is \$.0095 higher than middle, which is less than \$.0200. Therefore this six flock performance is satisfactory.

Example 2:**Grower B Six Flock Performance****Single Flock Performance**

(Diff. From middle grower
avg. of combined accts)

Settlement #1:	+\$0.0250
Settlement #2:	+ 0.0200
Settlement #3:	+ 0.0250
Settlement #4:	+ 0.0190
Settlement #5:	+ 0.0400* (Not included in six flock average)
Settlement #6:	<u>+ 0.0250</u>
Average	+ 0.0228

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Explanation: Grower B's best five out of six flock performance is \$.0228 higher than middle, which is more than \$.0200. Therefore this six flock performance is unsatisfactory.

If your six flock performance is unsatisfactory, you will receive a letter from George's stating you are on probation. Your probationary period will extend for at least two (2) flocks. During this probationary period, your layout time between flocks may be increased and your density may be reduced to try and improve your performance.

If your two probationary flocks improve your six flock performance to satisfactory, your probation will end. If your cost is no higher than middle grower flock cost for the average of the two probationary flocks, but your six flock performance does not improve to satisfactory, you will continue to receive probationary flocks, so long as your average probationary flock cost is no higher than middle grower flock cost. At any time following your first two probationary flocks, your average probationary flock cost becomes higher than middle grower flock cost, and your six flock performance remains unsatisfactory, your broiler growing contract will be terminated.

IN ADDITION TO THE ABOVE GEORGE'S POLICY AND PROCEDURE FOR UNSATISFACTORY GROWER PERFORMANCE, GEORGE'S SPECIFICALLY RESERVES ALL RIGHTS TO TERMINATE YOUR BROILER GROWING CONTRACT AT ANY TIME, INCLUDING THE PROBATIONARY PERIOD, FOR ANY OTHER PROVISIONS AS STATED IN THE BROILER GROWING CONTRACT.

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George's Performance Requirement-Large Broilers 18-6

19. SAMPLE COPY OF BROILER GROWING CONTRACT

BROILER GROWING CONTRACT

This contract between **GEORGE'S FARMS, INC.**, an Arkansas Corporation having its principal office at Springdale, Arkansas, and duly qualified to do business in the State of Arkansas, hereinafter called **GEORGE'S FARMS, INC.** and _____ of

Name

_____ hereinafter called **GROWER**. In consideration of the mutual
Address

covenants herein contained, the parties agree as follows:

I. **GEORGE'S FARMS, INC.** agrees:

- A. To deliver to **GROWER** approximately _____ broiler chicks on or about _____ 19____, as the first flock of birds to be raised under this contract, and thereafter to deliver broiler chicks, the number and breed of which are to be determined by **GEORGE'S FARMS, INC.** in its sole discretion, to **GROWER** from time to time as replacement flocks subject, however, to the termination provisions hereinafter contained, and to furnish the **GROWER** the necessary feed, vaccines, and medication necessary to raise said birds to processing age.
- B. To determine when and where birds will be processed and to notify the **GROWER** of the processing arrangements.
- C. After the processing of each flock to pay **GROWER** during succeeding week after broilers are processed based on the following methods:
 1. If it is determined by **GEORGE'S FARMS, INC.** Broiler Production Manager or his delegate, that the buildings supplied by the **GROWER** under this contract meet the standards established by **GEORGE'S FARMS, INC.** for improved broiler houses, as specified in Addendum A, then the **GROWER** will be paid on the following basis:

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Sample Copy of Broiler Growing Contract 19-1

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- a. Each week the production cost per pound exclusive of GROWER payment will be calculated for each broiler flock processed that week which were produced by contract growers under the supervision of GEORGE'S FARMS, INC. Broiler Production Manager or his delegate. Grower's production flock cost will consist of feed at \$10.00 cwt., chicks at 13.80 cents per head, and all medications at GEORGE'S FARMS, INC. current cost.
- b. Each week a listing for Small Broilers (less than a five (5) pound average) and a separate listing for Large Broilers (five (5) pound average and above) will be made of such flock cost by account number of GROWER beginning with the lowest cost and ending with the highest such cost. For the purpose of this GROWER COST ranking, growers producing for GEORGE'S OF MISSOURI, INC. and GEORGE'S BROILER FARMS under common feeding and/or management program as affiliates of GEORGE'S FARMS, INC. will be included in the COST POOL. From each of the above two listings (small and large broiler listings), two additional listings will be produced. LIST NUMBER ONE will be produced EXCLUDING farms owned by George's business entities, George's Family members or George's Employees or members of their households. LIST NUMBER TWO will be produced which includes all contract growers and ALL GROWERS PREVIOUSLY EXCLUDED ABOVE.

All contract growers MIDDLE GROWER COST AND GROWER PAY will be determined from LIST NUMBER ONE (1) which excludes farms owned by George's business entities, George's Family members or George's Employees or members of their households. MIDDLE GROWER COST AND GROWER PAY for George's

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business entities, George's family members or George's employees or members of their households will be determined from LIST NUMBER TWO.

When an "odd" number of Growers, for example eleven, are included in LIST NUMBER ONE OR LIST NUMBER TWO, then Grower number six's cost will be considered MIDDLE GROWER COST for that list.

When an "even" number of growers, for example ten, are included in LIST NUMBER ONE OR LIST NUMBER TWO, then two growers, growers five and six, will be used to determine an arithmetic average which will be considered MIDDLE GROWER COST for that list.

- c. Growers whose cost equals MIDDLE GROWER COST will receive \$.0415 per pound for small broilers or \$.0440 per pound for large broilers.

GROWERS above the MIDDLE GROWER COST will receive \$.0415 per pound for small broilers or \$.0440 per pound for large broilers plus 100% percent of the difference between their Flock Cost and the MIDDLE GROWER COST.

GROWERS below the MIDDLE GROWER COST will receive \$.0415 per pound for small broilers or \$.0440 per pound for large broilers less 50% percent of the difference between their Flock Cost and the MIDDLE GROWER'S Flock Cost, down to a minimum of \$.0290 per pound.

- d GROWERS whose buildings and surrounding area are not improved as established by GEORGE'S FARMS, INC. Broiler Production Manager or his delegate will be paid one-fourth cent per pound less than the amount determined under I. C.1.b, c.
- 2. If it is determined by GEORGE'S FARMS, INC. Broiler Production Manager or his delegate that the buildings and equipment supplied by the GROWER meet GEORGE'S FARMS, INC. standards for NEW HOUSING as specified by Addendum B, which became effective May 1, 1985, by Addendum C, which became effective January 1, 1994, and by Addendum E which became effective October 1, 1996. GROWER'S executing respective addendums will be paid under conditions and at rates specified therein.
- 3. All production flock costs and GROWER payments referred to above will be based upon the live weight of the broilers produced, determined by Processing Plant weights, less the live condemned weight. The live condemned weight consist of:
 - a. One-half ($\frac{1}{2}$) of equivalent live pounds due to parts condemned, determined by dividing the dressed weight of parts condemned, as stated on USDA's Condemnation Certificate, by .70, then dividing the result by 2.
 - b. All whole birds condemned as evidenced by USDA's Poultry Condemnation Certificate, referred to as a "lot", for Inflammatory Process (IP), Tuberculosis (TB), Leukosis (LK), Septicaemia and Toxemia (S&T), Synovitis (SN), Tumors (TM), Bruises (BR), and Airsacculitis (AS).
 - c. All whole bird head count is multiplied by the average live weight of that lot, with the resulting weight added to one-half ($\frac{1}{2}$) parts condemned weight for total pounds condemned.

GE-HB 0046
Confidential

11/96

Sample Copy of Broiler Growing Contract 19-4

II. GROWER agrees:

- A. To supply all land, buildings, equipment, labor, water, fuel, electricity, spray material, litter and other facilities and supplies necessary to properly care for and raise chicks to broiler processing age. To be present when chicks are delivered and when broilers are picked up for processing, and to establish and maintain good roads to his broiler houses which are easily accessible to trucks, and to make necessary preparations for use of mechanical loaders.
- B. To put forth his very best efforts to care for the birds, and to follow recommended management practices as are outlined to him by qualified representatives of GEORGE'S FARMS, INC. until birds are sold.
- C. To use only feed, feed supplements, medications and vaccines supplied by GEORGE'S FARMS, INC. and to feed and care for chickens raised under this contract according to the directions, rules, and requirements of GEORGE'S FARMS, INC. feeding, management, and sanitation program for broilers. No feeds, feed supplements, medications, vaccines or other supplies furnished by GEORGE'S FARMS, INC. will be used by GROWER for any purpose other than the raising of chickens under this contract.
- D. To accurately keep and to transmit as required any and all records requested by GEORGE'S FARMS, INC. pertaining to GROWER'S operations under this contract.
- E. To remove all dead birds and dispose of them in accordance with good poultry husbandry and all applicable laws.
- F. To dispose of litter in accordance with Best Managements Practices, described in Addendum D, a copy of which is attached and made a part hereof, and to work with Soil Conservation Service in developing a Nutrient Management Plan for his farm, and to follow all regulations pertaining to litter disposal.

- G. To permit GEORGE'S FARMS, INC. to publish the results of said feeding operations and any statements of GROWER or photographs taken concerning the same.
- H. If any of the following acts or events occur this contract will, at GEORGE'S FARMS, INC. discretion, immediately terminate, and the GROWER does hereby grant unto GEORGE'S FARMS, INC. the right to come upon the premises where the birds are situated, without court order or other writ, and to immediately take possession of all broilers, feed, medication and sanitation products placed with the GROWER and to dispose of same as GEORGE'S FARMS, INC. in its sole discretion, will determine, to wit:
1. In the event GEORGE'S FARMS, INC. feels unsafe or insecure in the manner in which the GROWER performs this contract.
 2. In the event the GROWER for any reason removes, or attempts to remove from the GROWER'S premises the broilers, feed, medication, vaccines or other supplies.
 3. In the event the GROWER in any manner encumbers, sells, or assigns said broilers, feed, medication, vaccines or other supplies, or attempts to do the same.
 4. In the event GEORGE'S FARMS, INC., in its sole discretion, feels the GROWER is not following GEORGE'S FARMS, INC. feeding, management, and sanitation program or is improperly or neglectfully feeding, or watering, or otherwise caring for said broilers.
 5. In the event the grower's performance is determined to be UNSATISFACTORY in accordance with George's Grower Performance Requirements as set forth in George's Grower's Handbook.

6. In the event the grower rents, leases, sells, abandons or otherwise relinquishes the responsibility for the care of the broilers or the poultry farm.
7. UPON TERMINATION OF THIS CONTRACT FOR BREACH OF A CONDITION MENTIONED HEREIN, GEORGE'S FARMS, INC. GROWER PAYMENT PLAN IS VOID, AND GROWER DOES HEREBY FULLY RELEASE GEORGE'S FARMS, INC. AND IT ASSIGNS FROM ANY AND ALL CLAIMS OF ANY KIND.

- I. The GROWER agrees to assume any losses incurred by GEORGE'S FARMS INC. due to contamination of birds raised under this agreement as the result of pesticide, herbicide, or insecticide residues arising from the unauthorized use of such products on the GROWER'S premises.

III. Both GEORGE'S FARMS, INC. and GROWER agree:

- A. In the event of catastrophic loss of birds, anytime prior to the time they are picked up from the GROWER'S premises, GROWER assumes any losses due to expenditure of labor, use of land, facilities, and equipment, and the cost of any fuel. GEORGE'S FARMS, INC. assumes the loss of the cost of the chicks, feed and other supplies furnished to date of loss.
- B. It is understood and agreed that all chicks and supplies furnished by GEORGE'S FARMS, INC. will remain the sole and exclusive property of GEORGE'S FARMS, INC.
- C. GROWER will have the right to terminate this contract by giving notice in writing to the Broiler Production Manager, GEORGE'S FARMS, INC., P.O. Drawer G, Springdale, Arkansas 72765, at least seven (7) days prior to delivery of replacement chicks to said GROWER.

D. GEORGE'S FARMS, INC. will have the right to terminate this contract in accordance with the contract provisions by giving notice in writing to the GROWER within seven (7) days after the date of the last flock payment.

E. This contract supersedes all previous contracts and amendments thereof.

IV. INDEPENDENT CONTRACTORS:

It is expressly understood and agreed by the parties hereto:

A. That GROWER accepts full and exclusive liability for the payment and agrees to pay and indemnify and save GEORGE'S FARMS, INC. harmless from any and all claims, for federal, state, and local taxes, now or hereinafter imposed for Worker's Compensation Insurance, Unemployment Compensation Insurance, or Old Age Benefits, or Annuities, as to himself and all persons engaged in the performance of this contract on behalf of the GROWER. Said Claims and taxes shall be paid directly by GROWER.

B. That the GROWER, his agents and employees will not be considered to be employees of GEORGE'S FARMS, INC. for any purpose whatsoever.

IN WITNESS WHEREOF, the parties hereto have executed this _____ day of _____
19 ____.

GROWER

GEORGE'S FARMS, INC.

By: _____

Title: _____

For purposes of compensation under this contract, GROWER'S broiler houses and equipment are designated of the type indicated below. GROWER fully understands his payments will be determined in accordance with terms of paragraphs and/or addendums designated.

Non-Improved Capacity	<input type="checkbox"/>	Paragraph I.C. 1.b, c, d
Improved Capacity - Addendum A	<input type="checkbox"/>	Paragraph I.C. 1. b, c
New Capacity - Addendum B	<input type="checkbox"/>	Paragraph I.C. 1. b, c and Paragraph I.C.2
New Capacity - Addendum C	<input type="checkbox"/>	Paragraph I.C. 1. b, c and Paragraph I.C.2
New Capacity - Addendum E	<input type="checkbox"/>	Paragraph I.C. 1. b, c and Paragraph I.C.2

GROWER

BROILER SERVICEMAN

SOCIAL SECURITY NUMBER

FEDERAL I.D. NUMBER

MAILING ADDRESS:

PHONE NUMBER:

Revised 11-96

() _____

GEORGE'S FARMS, INC.
BROILER GROWING CONTRACT
Addendum A

IMPROVED HOUSING SPECIFICATIONS

1. Composter or incinerator for dead birds.
2. Keep weeds and grass mowed around houses.
3. Electric wires to the house will be underground from a meter loop pole located well away from any truck traffic.
4. Insulation with a minimum R factor of 7.5.

ADDENDUM B
GEORGE'S FARMS, INC.

NEW HOUSE GUARANTEE AND CONDITIONS OF PAYMENT

Effective May 1, 1985

The undersigned GROWER has built and equipped broiler houses to GEORGE'S FARMS, INC. new house specifications described by Addendum B-1 which is attached hereto and made a part hereof. Subject to the following conditions, GEORGE'S FARMS, INC. agrees to pay GROWER at the rate of \$0.0425 per pound of live weight produced less farm condemnations, as defined in paragraph I-C-3 of Master Contract, which was executed _____ 19____, for the first thirty (30) flocks grown in the new approved houses subsequent to May 1, 1985, provided that:

1. The GROWER maintains middle cost of production or better on two (2) of the last three (3) flocks provided (current flock plus previous two (2) flocks).
2. The GROWER will be paid the \$0.04250 per pound minimum on the first two (2) flocks in the new house, or the amount payable on the regular settlement, whichever is higher.
3. If the GROWER does not maintain middle cost of production or better on two (2) out of the first three (3) flocks, the guarantee will not be paid on the third flock. Payment shall be the regular contract settlement amount for improved capacity.
4. GEORGE'S will reinstate the \$0.04250 guaranteed minimum when the GROWER'S cost improves to middle cost of production or better on two (2) of the last three (3) flocks produced, unless the contract is terminated in accordance with its conditions.
5. Guaranteed minimum payment will commence on settlements after May 1, 1985, for currently qualified houses.

GE-MB 0055
Confidential

IN WITNESS WHEREOF, the parties hereto have executed this agreement this _____ day of
_____ 19 _____

GEORGE'S FARMS, INC.

By: _____

GROWER

Title: _____

Revised: 11/96

11/96

GE-HB 0036
Confidential

Sample Copy of Broiler Growing Contract 19-12

ADDENDUM B-1
GEORGE'S FARMS, INC.
NEW HOUSE REQUIREMENTS

Effective May 1, 1985

To qualify for the minimum Payment Guarantee, new houses must be constructed in exact conformance with the following:

1. House construction must have been completed January 1, 1984 or after.
2. The dimensions of the house will be 40 feet wide by 400 feet long.
3. The house must lay on an east-west axis.
4. Houses will be clear-span, steel construction with six (6) feet side-walls. The side-walls will be insulated two (2) feet up from the bottom of the truss.
5. Insulation in the roof must be (1 ½) one and one-half inch styrofoam or one inch thermax. Side-wall and end-wall insulation must be one inch of styrofoam or one inch of thermax covered with wood on the inside and sheet metal on the outside.
6. Footing specifications must be:
 - a. 9" inches wide.
 - b. 12" inches above ground level.
 - c. 8" inches below ground level with a 9 x 18" inch pier hole under each truss, which would be equal to 38" inches from top of form to bottom of pier hole, or one (1) 12" inch bucket scoop under each truss, 8" inches deep and 20" inches long.
7. A level loading area, well graveled and maintained is necessary. The area must extend 60 feet in front of the house.
8. Electrical wires to the house will be underground from a meter loop pole located well away from any truck traffic.

GE-HB 0057
Confidential

ADDENDUM B-1
BROILER GROWING CONTRACT

The following equipment will be required in new houses in order to qualify for the Guaranteed Minimum payment:

1. **Feeders:** Automatic, pan-type, two lines with four pans per ten feet section of feeder. Feed lines will have automatic cut-off pans at $\frac{1}{3}$ house and $\frac{1}{2}$ house partitions to facilitate brooding. Each pan will have a minimum of 132 square inches of available feed space.
2. **Waterers:** Four lines of continuous cup-type drinkers on thirty inch centers in the one-third house brood area. Three lines of continuous cup-type drinkers on thirty inch centers in the remaining two-thirds of the house plumbed with adequate cut-offs and drains for freeze protection, and medicator/vaccinator hook-up.
3. **Ventilation:** In a 400 foot house three 36 inch fans mounted in the north side for exhausting and hinged to open for summer ventilation. Eight 36 inch fans on winches down the center of house for winter circulation and summer ventilation. All fans must be controlled by timers and thermostats. One fan per 50 linear feet of building is required.
4. **Bulk Feed Bins:** Feed capacity must equal one and one-quarter pound per bird based on .8 square feet per bird. Two bins per house are required.
5. **Brooders:** A minimum of 40 BTUS per bird is required. One brooder per 1500 birds situated in two lines near the side-walls is required in the brooding area (one-third of the house).
6. **Lights:** One row of light down the center of the house spaced on twenty foot centers. Sixty-watt incandescent or nine-watt fluorescent must be used.

GE-HB 0008
Confidential

7. Curtains: North and south side-wall curtains will be of black material with eighteen inches of clear material on the top.
8. Curtain Machines: Curtains will be controlled by an A.C. machine on the north side of the house and an A.C./D.C. machine on the south side of the house.
9. Dead Bird Disposal: Dead birds will be disposed of in accordance with instructions issued by the State agencies.
10. A divider curtain at 1/3 and 1/2 house is required.
11. Permanently installed foggers with nozzles, filter, solenoid valves, pressure pump and thermostat.
12. Any deviation from building and equipment requirements must be approved in writing by the Serviceman, Broiler Production Manager, and the Live Production Manager, and attached hereto as part of this Addendum.

ADDENDUM C
GEORGE'S FARMS, INC.
NEW HOUSE GUARANTEE AND CONDITIONS OF PAYMENT

Effective January 1, 1994

The undersigned GROWER has built and equipped broiler houses to GEORGE'S FARMS, INC. new house specifications described by Addendum C-1 which is attached hereto and made a part hereof. Subject to the following conditions, GEORGE'S FARMS, INC. agrees to pay GROWER at the rate of \$0.0450 per pound of live weight produced less farm condemnations, as defined in paragraph I-C-3 of Master Contract, which was executed _____ 19____, for the first thirty (30) flocks grown in the new approved houses subsequent to January 1, 1994, provided that:

1. The GROWER maintains middle cost of production or better on two (2) of the last three (3) flocks provided (current flock plus previous two (2) flocks).
2. The GROWER will be paid the \$0.04500 per pound minimum on the first two (2) flocks in the new house, or the amount payable on the regular settlement, whichever is higher.
3. If the GROWER does not maintain middle cost of production or better on two (2) out of the first three (3) flocks, the guarantee will not be paid on the third flock. Payment shall be the regular contract settlement amount for improved capacity.
4. GEORGE'S will reinstate the \$0.04500 guaranteed minimum when the GROWER'S cost improves to middle cost of production or better on two (2) of the last three (3) flocks produced, unless the contract is terminated in accordance with its conditions.
5. Guaranteed minimum payment will commence on settlements after January 1, 1994, for currently qualified houses.

IN WITNESS WHEREOF, the parties hereto have executed this agreement this _____ day of
_____ 19 ____

GEORGE'S FARMS, INC.

GROWER

By: _____

Title : _____

Revised: 11/96

11/96

GE-HB 0061
Confidential

Sample Copy of Broiler Growing Contract 19-17

ADDENDUM C-1

GEORGE'S FARMS, INC.
BROILER GROWING CONTRACT
NEW HOUSE REQUIREMENTS

Effective January 1, 1984

To qualify for the minimum Payment Guarantee, new houses must be constructed in exact conformance with the following:

1. House construction must have been completed January 1, 1984 or after.
2. The dimensions of the house will be 40 feet wide by 400 feet long.
3. The house must lay on an east-west axis.
4. Houses will be clear-span, steel truss construction with seven (7) feet side-walls. The side-walls will be insulated two (2) feet up from the bottom of the truss.
5. Insulation in the roof must be (1 ½) one and one-half inch styrofoam. Side-wall and end-wall insulation must be one inch of styrofoam covered with wood on the inside and sheet metal on the outside.
6. Footing specifications must be:
 - a. 9" inches wide.
 - b. 12" inches above ground level.
 - c. 8" inches below ground level with a 9 x 18" inch pier hole under each truss, which would be equal to 38" inches from top of form to bottom of pier hole, or one (1) 12" inch bucket scoop under each truss, 8" inches deep and 20" inches long.

GE-HB 8842
Confidential

7. A level loading area, well graveled and maintained is necessary. The area must extend 60 feet in front of the house.
8. Electrical wires to the house will be underground from a meter loop pole located well away from any truck traffic.

GE-HB 0063
Confidential

11/96

Sample Copy of Broiler Growing Contract 19-19

ADDENDUM C-1
BROILER GROWING CONTRACT

The following equipment will be required in new houses in order to qualify for the Guaranteed Minimum payment:

1. **Feeders:** Automatic, pan-type, two lines with four pans per ten feet section of feeder. Feed lines will have automatic shut-off pans at 1/3 house and 2/3 house partitions to facilitate brooding.
2. **Waterers:** Four lines of continuous nipple drinkers through out the house spaced according to manufacturer's recommendation, plumbed with adequate cut-offs and drains for freeze protection, and medicator/vaccinator hook-up.
3. **Ventilation:** In a 400 foot house four 36 inch fans mounted in the north side for exhausting and hinged to open for summer ventilation. Sixteen (16) 36 inch fans in two lines on winches down the center of house for winter circulation and summer ventilation. Twenty (20) vent boards 6" x 48" spaced evenly in the top board of the south sidewall are required. All fans must be controlled by timers and thermostats. Two fans per 50 linear feet of building are required.
4. **Bulk Feed Bins:** Feed capacity must equal one and one-quarter pound per bird based on .8 square feet per bird. Two bins per house are required, with separate fill systems.
5. **Brooders:** Thirty-eight (38) Jet-type brooders on 3 zone controls with battery back-up, in two lines near the sidewalls is required.
6. **Lights:** One row of light down the center of the house spaced on twenty foot centers. Sixty-watt incandescent or nine-watt fluorescent must be used.

GE-HB 0064
Confidential

7. **Curtains:** North and south side-wall curtains will be of black material with adequate clear material on the top to allow 6 inches of light when curtain is completely closed. Curtain must overlap the freeze board at least 5 inches.
8. **Curtain Machines:** Curtains will be controlled by an A.C. machine on the north side of the house and an A.C./D.C. machine on the south side of the house.
9. **Dead Bird Disposal:** Dead birds will be disposed of in accordance with instructions issued by the Federal, State and Local agencies.
10. **A divider curtain and five 2' x 8' plywood divider boards at 1/3 and 2/3 house are required.**
11. **Permanently installed foggers with stainless steel nozzles, filter, two solenoid valves, 200 PSI pressure pump and two thermostats.**
12. **Any deviation from building and equipment requirements must be approved in writing by the Serviceman, Broiler Production Manager, and the Live Production Manager, and attached hereto as part of this Addendum.**

ADDENDUM D
GEORGE'S FARMS, INC.
DRY POULTRY LITTER HANDLING
BEST MANAGEMENT PRACTICES

It is recommended that each farm have a waste management plan. These are interim recommended guidelines to be used until waste management plans can be prepared for each farm.

1. Poultry litter should not be stored outside unless proper runoff controls are provided for collection and containment of rainwater that comes in contact with piles of litter.
2. Poultry litter should be evenly distributed over application sites at a rate not to exceed 5 tons per acre per year, or according to a site-specific land management plan, with no more than 2.5 tons/acre in each application. (As a rule of thumb, 30 acres for one 16,000 sq. Ft. house per year).
3. Land application of poultry waste should not be undertaken when soil is saturated, frozen or covered with snow, or during rainy weather or when precipitation is in the immediate forecast.
4. Poultry waste should not be applied on slopes with a grade of more than 15% or according to a site-specific land management plan or in any manner that will allow waste to enter the waters of the state.
5. Surface and subsurface application of poultry waste should not be made within 25 feet of rock outcrops; 100 feet of streams, ponds, lakes, springs, sinkholes, wells, water supplies and dwellings, or according to a site-specific land management plan.
6. Records should be kept by the farmer of the dates, quantity, and specific sites where litter is applied; or if the litter is sold, a record should be kept of who buys the litter, the dates, quantities, and farm or sites where the litter is applied or utilized.
7. Vehicles used for transporting poultry litter on state or federally maintained roads or more than 1 mile on any other public road, should be covered or tarped.

Complied by Cooperative Committee for Poultry Farm Litter and Waste Disposal - comprised of members of the Arkansas Poultry Federation, Soil Conservation Service, Arkansas Department of Pollution Control and Ecology, Arkansas Extension Service, and Arkansas Soil & Water Conservation Service

GE-HB 0000
Confidential

11/96

Sample Copy of Broiler Growing Contract 19-22

ADDENDUM E
GEORGE'S FARMS, INC.
NEW HOUSE GUARANTEE AND CONDITIONS OF PAYMENT

Effective October 1, 1996

The undersigned GROWER has built and equipped broiler houses to GEORGE'S FARMS, INC. new house specifications described by Addendum E-1 which is attached hereto and made a part hereof. Subject to the following conditions, GEORGE'S FARMS, INC. agrees to pay GROWER at the rate of \$0.0450 per pound of live weight produced less farm condemnations, as defined in paragraph I-C-3 of Master Contract, which was executed _____19____, for the first thirty (30) flocks grown in the new approved houses subsequent to October 1, 1996, provided that:

1. The GROWER maintains middle cost of production or better on two (2) of the last three (3) flocks provided (current flock plus previous two (2) flocks).
2. The GROWER will be paid the \$0.04500 per pound minimum on the first two (2) flocks in the new house, or the amount payable on the regular settlement, whichever is higher.
3. If the GROWER does not maintain middle cost of production or better on two (2) out of the first three (3) flocks, the guarantee will not be paid on the third flock. Payment shall be the regular contract settlement amount for improved capacity.
4. GEORGE'S will reinstate the \$0.04500 guaranteed minimum when the GROWER'S cost improves to middle cost of production or better on two (2) of the last three (3) flocks produced, unless the contract is terminated in accordance with its conditions.
5. Guaranteed minimum payment will commence on settlements after October 1, 1996, for currently qualified houses.

GE-HB 0047
Confidential

11/96

Sample Copy of Broiler Growing Contract 19-23

IN WITNESS WHEREOF, the parties hereto have executed this agreement this _____ day of
_____ 19 ____.

GEORGE'S FARMS, INC.

GROWER

By: _____

Title: _____

GE-HS 0000
Confidential

11/96

Sample Copy of Broiler Growing Contract 19-24

ADDENDUM E-1

GEORGE'S FARMS, INC.
BROILER GROWING CONTRACT
NEW HOUSE REQUIREMENTS

Effective October 1, 1996

To qualify for the minimum Payment Guarantee, new houses must be constructed in exact conformance with the following:

1. House construction must have been completed October 1, 1996 or after.
2. The dimensions of the house will be 40 feet wide by 400 feet long, 450 feet or 500 feet long.
3. The house must lay on an east-west axis.
4. Houses will be clear-span, steel truss construction with seven (7) feet side-walls. The side-walls will be insulated two (2) feet up from the bottom of the truss.
5. Insulation in the roof must be (1 ½) one and one-half inch styrofoam. Side-wall and end-wall insulation must be one inch of styrofoam covered with wood on the inside and sheet metal on the outside.
6. Footing specifications must be:
 - a. 9" inches wide.
 - b. 12" inches above ground level.
 - c. 8" inches below ground level with a 9 x 18" inch pier hole under each truss, which would be equal to 38" inches from top of form to bottom of pier hole, or one (1) 12" inch bucket scoop under each truss, 8" inches deep and 20" inches long.

GE-FRM 0009
Confidential

7. A level loading area, well graveled and maintained is necessary. The area must extend 60 feet in front of the house.
8. Electrical wires to the house will be underground from a meter loop pole located well away from any truck traffic.

ADDENDUM E-1
BROILER GROWING CONTRACT

The following equipment will be required in new houses in order to qualify for the Guaranteed Minimum payment:

1. **Feeders:** Automatic, pan-type, two lines with four pans per ten feet section of feeder. Feed lines will have automatic shut-off pans at 1/3 house and 2/3 house partitions to facilitate brooding.
2. **Waterers:** Four lines of continuous nipple drinkers through out the house spaced according to manufacturer's recommendation, plumbed with adequate cut-offs and drains for freeze protection, and medicator/vaccinator hook-up.
3. **Ventilation:** In a 400 foot broiler house, four 36 inch fans should be mounted in the north side wall for exhausting. They should be hinged to open for summer ventilation. There should be five fans for a 450 foot broiler house and six fans for a 500 foot broiler house. Two 36 inch fans per 50 feet of house length, winched in two lines down the center of house are required, for winter circulation and summer ventilation. Vent boards every 20 feet, 6" x 48" spaced evenly in the top board of the south sidewall are required. All fans must be controlled by five minute timers and thermostats. Tunnel ventilation fans must be sized according to manufacturer's recommendations. Air baffles must be installed every 50 linear feet.
4. **Bulk Feed Bins:** Feed capacity must equal one and one-quarter pound per bird based on .8 square feet per bird. Two bins per house are required, with separate fill systems.
5. **Install one jet-type brooder per 500 chicks.** Three zone controls with battery back-up, in two lines near the sidewalls is required. Make-up heaters of equivalent BTU rating may be used in two-thirds house and full house provided a stand-by generator is available.
6. **Lights:** One row of light down the center of the house spaced on twenty foot centers. Sixty-watt incandescent or nine-watt fluorescent must be used.

GE-HB 0071
 Confidential

11/96

Sample Copy of Broiler Growing Contract 19-27

7. **Curtains:** North and south side-wall curtains will be of black material with adequate clear material on the top to allow 6 inches of light when curtain is completely closed. Curtain must overlap the freeze board at least 5 inches.
8. **Curtain Machines:** Curtains will be controlled by an A.C. machine on the north side of the house and an A.C./D.C. machine on the south side of the house. Tunnel ventilated houses require AC/DC machines on both sides of the house.
9. **Dead Bird Disposal:** Dead birds will be disposed of in accordance with instructions issued by the Federal, State and Local agencies.
10. A divider curtain and five 2' x 8' plywood divider boards at 1/3 and 2/3 house are required.
11. Permanently installed foggers with stainless steel nozzles, filter, two solenoid valves, 200 PSI pressure pump and two thermostats.
12. Any deviation from building and equipment requirements must be approved in writing by the Serviceman, Broiler Production Manager, and the Live Production Manager, and attached hereto as part of this Addendum.

20. ARKANSAS DEAD BIRD DISPOSAL STATE REGULATIONS

FINAL RULE

ARKANSAS LIVESTOCK AND POULTRY COMMISSION
EFFECTIVE DATE: JULY 1, 1993
JACK GIBSON, DIRECTOR

Page 1 of 4

ACT 87 OF 1963, ACT 150 OF 1985, ACT 168 OF 1985, ACT 20 OF 1989,
ACT 241 OF 1993

REGULATIONS FOR ACCEPTABLE METHODS
OF POULTRY CARCASS DISPOSAL
AS AMENDED MARCH, 1993

ACCEPTABLE METHODS ARE AS FOLLOWS:

1. Cremation or incineration
2. Composting of carcasses
3. Extrusion
4. Rendering
5. Cooking for swine feed
6. On-farm freezing

CREMATION OR INCINERATION AS A METHOD OF CARCASS DISPOSAL -

Controlled burn machine for the purpose of cooking
carcass so as not to disseminate disease. This means
cooking carcass until meat is rendered to ash.

COMPOSTING AS A METHOD OF CARCASS DISPOSAL -

- a. Must be practically odorless.
- b. Must be to where pathogenic bacteria are destroyed (150
degrees F).
- c. Carcasses must be reduced to nothing, only feathers,
and bones remaining. This takes about 10-14 days.
- d. Operated to where fly larvae are not a problem.

11/96

Arkansas Dead Bird Disposal State Regulations 20-1

GR-HB 0073
Confidential

EXTRUSION AS A METHOD OF CARCASS DISPOSAL -

- a. Enough heat must be generated to render finished product pathogen free.
- b. Carcasses, if moved off the farm, must be moved under "Carcass Moving Guidelines."
- c. Permit required from the Arkansas Livestock and Poultry Commission.

RENDERING AS A METHOD OF CARCASS DISPOSAL -

- a. Shall be done without odor contamination.
- b. Area around rendering unit shall be maintained in a sanitary manner; that is,
 - (1) No carcasses of any type being held over 24 hours.
 - (2) No pools of contaminated material allowed.
 - (3) Carcasses must be ground and temperature must reach 230 degrees F.
 - (4) End product stored in a clean area that is varmit-proof.
- c. Carcasses, if moved off the farm, must be moved under "Carcass Moving Guidelines."
- d. Permit required from the Arkansas Livestock and Poultry Commission.

COOKING FOR SWINE FEED AS A METHOD OF CARCASS DISPOSAL -

- a. Temperature of 212 degrees F must be maintained for 30 minutes.
- b. Shall be done without odor contamination.
- c. Area around cooking unit shall be maintained in a sanitary manner; that is,

- (1) No carcasses of any type being held over 24 hours.
 - (2) No pools of contaminated material allowed.
 - (3) End product stored in a clean area that is varmit-proof.
- d. Carcasses, if moved off the farm, must be moved under "Carcass Moving Guidelines."
 - e. Permit required from the Arkansas Livestock and Poultry Commission.

ON-FARM FREEZING AS A METHOD OF CARCASS DISPOSAL

- a. Carcasses will be frozen to a solid state before being removed from the farm.
- b. Frozen carcasses will be placed in a container that will not leak when thawing begins.
- c. Frozen carcasses will be transported from the farm in a sealed, leak-proof vehicle.

MAJOR DIE-OFF -

- a. In the event of a major die-off, rendering will be the method of choice for disposal, except when death is caused by a disease entity.
- b. A ditch may be used when dug 2 to 4 feet deep and covered by at least 2 feet of dirt. Lime may be used to control odor if needed.

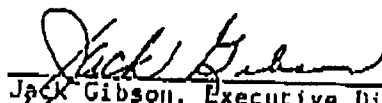
POULTRY CARCASS MOVING GUIDELINES FROM FARM

1. Anytime poultry carcasses are removed from the farm, they must be moved under the "Poultry Carcass Moving Guidelines."
2. May be cancelled in times of LT, AI, or anytime state

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- veterinarian deems necessary to stop disease spread.
3. Poultry carcasses must be placed in a leak-proof garbage dumpster that remains on the farm, then dumped into a sealed, leak-proof garbage truck; or can be sealed in leak-proof plastic containers to be placed in a sealed, leak-proof vehicle to be moved to the site of destruction.
 4. Frozen poultry carcasses must be placed in a sealed, leak-proof vehicle or container and covered before being transported to point of destination.

Issued in Little Rock, Arkansas on June 17, 1993.


Jack Gibson, Executive Director
Ark. Livestock & Poultry Commission

EMERGENCY ACTION MARCH 11, 1993
FOR ACT 241 of 1993 WHICH PRESCRIBES
ACCEPTABLE METHODS FOR THE DISPOSAL OF FOWL CARCASSES

Act 241 of 1993 does not provide a time period to close disposal pits and for phasing in of alternate disposal methods. Several hundred producers need time in which to change to alternate approved methods. Thus, the Arkansas Livestock and Poultry Commission finds an emergency to exist and the following enforcement policy shall be enacted:

1. Effective immediately, no new construction of pits will be approved.
2. Disposal pits that are functioning properly and used properly may be used until July 1, 1994.
3. Disposal pits that are not functioning properly, that we get complaints on, will be closed immediately and will not be allowed for further use for poultry carcass disposal.
4. After July 1, 1994, disposal pits will not be used for carcass disposal for daily die-off.

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Arkansas Dead Bird Disposal State Regulations 20-5

21. MISSOURI DEAD BIRD DISPOSAL STATE REGULATIONS

Department of Natural Resources-Poultry Issues

ACRES REQUIRED FOR LAND APPLYING POULTRY LITTER

The land application acres needed for utilization of the litter may range from 40 to 160 acres for a typical poultry broiler growing operation (two buildings with capacity for 20,000 chickens each) and 110 to 440 acres for a typical turkey operation (two buildings with capacity for 10,000 turkeys each) depending on the nitrogen requirements of the vegetation grown. Acceptable litter application rates range from 2 to 10 tons/acre per year. Using a conservative rate and projecting the number of poultry planned for the year 1995, the total land application requirement for southwest Missouri would be about 10-20% of the available pasture and cropland acres (Barry, Jasper, Lawrence, McDonald, and Newton counties). This percentage would be somewhat higher in the vicinity of the major poultry processing plants.

DISPOSAL OF DEAD POULTRY

The options available for dead bird disposal are composting, rendering, incineration, and landfilling. On-site burial of birds is not recommended due to potential leachates which may contribute to groundwater problems. Landfills are not readily available in this area. This leaves incineration, composting, and rendering as the three most practical options. Incineration must be done in an enclosed burner that meets the specifications of the DNR's Air Pollution Control Program. An incinerator permit may be required depending on location, size, and other factors. Composting is a promising new technology that is now being made available to producers.

COMPOSTING TECHNOLOGY DEMONSTRATIONS

Composting of dead poultry was developed in Maryland and Delaware in an effort to protect ground water. It has proven successful there and in some southern states. It is practical, inexpensive, environmentally sound, generates no offensive odors, and does not draw insects. DNR has been working closely with the Soil Conservation Service, University Extension, and poultry processors to introduce Missouri growers to the use of composting as a means of dead-bird disposal. In a demonstration project now underway, five composter units will be built, one in each of the five southwest-most counties of McDonald, Barry, Newton, Lawrence, and Jasper. Each of the five major processing companies is cooperating in the project and cost-sharing on construction of the units. Growers will be able to see dead-bird composting first hand.

LAND USE CONTROLS - PLANNING AND ZONING

The Department of Natural Resources is committed to protecting the high quality water resources of southwest Missouri. Department authority, however, does not extend to mandating land-use controls for counties. That right remains the prerogative of the county citizens, those who are most affected by land use and use controls. The county planning and zoning process is the statutory mechanism to address these issues.

LAWS AND REGULATIONS - POULTRY GROWERS

Poultry litter management is administered by the Letter of Approval Program under the Missouri Clean Water Law (MCWL) and regulations. The Letter of Approval is a no-discharge type of permit that is provided in lieu of a federal National Pollutant Discharge Elimination System permit. Guidance material such as University of Missouri Extension guide sheets and Department of Natural Resources "Manual 121" or "Design Guidelines for Animal Waste Management for Concentrated Animal Feeding Operations" can be used by private consultants, University Extension personnel, and the Soil Conservation Service in providing technical assistance to poultry farmers on the proper methods of land applying poultry litter.

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LAWS AND REGULATIONS - POULTRY PROCESSORS

Poultry processing facilities are regulated under the MCWL Permit Program for disposal of wastewater and sludges, including land application of wastes. Poultry wastes such as grease sludges from poultry processing plants may be land applied by following the industrial section of the department sludge guidelines, "Agricultural Use of Municipal Wastewater Sludges." Under these guidelines, a sludge management plan is set up so that the sludges are applied to agricultural land at agronomic (crop nutrient utilization) rates. Testing of sludge is required to ensure that they are safe for land application purposes. Poultry waste sludges that are disposed of in landfills are regulated under the Missouri Solid Waste Management Law and regulations.

NINE-POINT PLAN FOR POULTRY

The Department of Natural Resources announced a nine-point strategic plan at a meeting of the Missouri Poultry Federation in April, 1990.

The three main thrusts of the plan are: 1) promote proper waste disposal practices through education and technical assistance; 2) assess current environmental and industry conditions; and 3) evaluate and adjust regulatory efforts as necessary to protect water quality.

The Department of Natural Resources will continue to monitor and evaluate water quality through the activities noted in the nine-point plan. When violations occur, appropriate enforcement actions will be taken. If necessary, changes will be made to the current regulations to ensure that the quality of surface water and groundwater in southwest Missouri is maintained.

TO LEARN MORE ABOUT WATER QUALITY OR OTHER NATURAL RESOURCES, PLEASE WRITE:

MISSOURI DEPARTMENT OF NATURAL RESOURCES
P.O. BOX 176
JEFFERSON CITY, MO 65101

OR CALL TOLL-FREE: 1-800-334-6946

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9/90

11/96

Missouri Dead Bird Disposal State Regulations 21-2

OKLAHOMA REGULATIONS ON POULTRY WASTE HANDLING

INTRODUCTION

The poultry industry is experiencing a rapid growth in terms of number of farms and total production in Oklahoma. This rapid growth in commercial poultry production draws attention to the potential problems associated with confined feeding operations. In order to sustain this economically positive industry, the environmental impact of the wastes/by-products from poultry must be handled in a resourceful and environmentally acceptable manner. The agriculturally beneficial wastes must be managed in such a manner as to protect the environment and help eliminate the need for additional and perhaps more stringent regulations.

RULES & REGULATIONS

Feed Yard Act

The rules and regulations governing animal wastes and by-product disposal are set forth, in part, by the Oklahoma Feed Yard Act. This act became effective on October 1, 1981 and defines a concentrated animal feeding operation and how waste products from these facilities may be properly handled. The Act essentially requires total retention of animal wastes and waste water and proper disposal of these materials. The type and implementation of an animal waste management plan is the responsibility of the poultry operation owner/operator. Technical assistance for the design, construction, and management of a waste handling system may be provided by the local county United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) or Cooperative Extension Service at the owner/operator's request. The current regulations became effective May 11, 1991 and outline the minimum standards for safe

and effective animal waste management. Cost-share assistance is available in most counties through the USDA-Consolidated Farm Services Agency (formerly called Agriculture Stabilization and Conservation Service) for construction of waste management facilities by local owners and operators.

Regulatory Authority

The Oklahoma Board of Agriculture, acting as the Oklahoma State Department of Agriculture (OSDA), Animal Industries Division is the state agency delegated the enforcement responsibility for the Oklahoma Feed Yard Act. Currently the OSDA has not been delegated full authority over the Environmental Protection Agency (EPA)-National Pollution Discharge Elimination System (NPDES) General Permit program for agricultural point source discharges. The EPA-NPDES Permit program, which went into effect for Oklahoma in May, 1993, requires all Concentrated Animal Feeding Operations (CAFO's) to follow the requirements for record keeping, notification, and management detailed under General Permit regulations.

CAFO Permitting

Currently, all broiler operations are not considered CAFO's and so are exempt from Permit coverage. Layer operations with liquid manure systems, however, that have a capacity of 30,000 hens are required to obtain a General Permit and follow all of the associated requirements. If an operation is found to discharge wastewater, then as few as 9000 hens can make an operation a CAFO.

Poultry operations with liquid waste handling systems that might require General Permit coverage should refer to the inter-agency published Information Sheet

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Poultry Waste Handling

(February, 1993) "EPA Region 6 General Permit for Concentrated Animal Feeding Operations (CAFOs)." This publication is available through the county Extension or county USDA-NRCS offices.

Also, a series of Question and Answer Supplements to the Information Sheet is available as OSU Fact Sheet number _____.

This information will assist in determining facilities' design, applying for Permit coverage and complying with Permit requirements. A CAFO record book is available through the County Extension office (cost is \$6.00) to help with the record keeping requirements of the EPA General Permit.

The OSDA may assist the EPA in preparing NPDES General Permits for poultry operations that discharge as point sources into waters of the United States and qualify by the number of confined animal units outlined in the definitions (Section 9-202) of the Oklahoma Feed Yard Act.

Inspections & Enforcement

OSDA Inspectors conduct on-site inspections of a facility's animal waste management system to ensure compliance with the Feed Yard Act. The Feed Yard Act gives these inspectors authority to enter an animal feeding operation to conduct such inspections. These may be performed on a routine basis or during the investigation of complaints as to its operations or to determine whether there are any violations of this Act. A feed yard license is not required, unless water quality related problems are occurring as determined by an OSDA on-site inspection. Licensing is available to those who wish to voluntarily submit to the inspection to ensure compliance with the Feed Yard Act rules and regulations. Licensed operations through the OSDA have the benefit of some added protection and reduced liability since their operations' waste management is more

fully documented. For example, licensed operations that are at least 3 miles from city limits and have fewer than 10 residences within 1 mile of the poultry houses are exempt from nuisance complaints. The annual licensing fees range from \$10-\$150 depending upon the operation's capacity in terms of animal numbers. The penalties for non-compliance with the rules and regulations of the Oklahoma Feed Yard Act can range from \$100 to \$10,000 and up to 6 months in prison for each day of each violation.

**POULTRY WASTES WITH
POTENTIAL ENVIRONMENTAL
CONCERNS INCLUDE LITTER AND
CARCASSES**

LITTER HANDLING

Under the Feed Yards Act the responsibilities for poultry producers for handling litter require that animal wastes be handled such that the litter shall not discharge pollutants to surface or ground waters. Discharges are easily documented by testing suspected polluted waters for nutrients (typically nitrogen or phosphorus). In the case of a stream, waters downstream of a suspected discharge are compared to upstream samples. Increases in nutrients downstream mean a discharge has occurred.

Applying animal wastes on land to improve soil or plant resources is considered an approved best management practice. Land application rates should be based on available nitrogen content of the waste (litter). However, the rate may be based on phosphorus where local water quality is threatened. This is determined by USDA-NRCS Waste Utilization Standard 633 (or its current replacement).

Nitrogen fertilization with litter in this manner is called land application at

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Poultry Waste Handling

agronomic rates. In other words, litter is applied based on the plants' requirements for nutrients.

Exceeding agronomic rates is called dumping and can lead to discharges of nutrients. This type of application is in violation of Oklahoma's Feed Yard Act and to the EPA's NPDES General Permit.

There are other instances where conditions can create a similar fate of litter nutrients. These include application of litter:

- X to saturated ground
- X to frozen ground
- X on steep slopes (> 15%)
- X near ponds, streams, and well heads
- X near rock outcroppings

When storing litter outdoors, care must be taken to prevent drainage from the pile from reaching water ways. This is considered the most likely way that a broiler operation could become a point source of pollution and designated a CAFO. A designated CAFO requires EPA permitting. There are several considerations when litter needs to be stored: the lay of the land, potential rainfall entering the stack, runoff from the stack, the length of time storage will be needed, available equipment for handling, and intended purpose for the litter. All rainfall that enters a waste contaminated area is then considered waste water and must be prevented from entering creeks, streams, and lakes. This may be done by collecting or dispersing, or the operator may choose to divert these waters prior to contamination.

Litter may also be used as a cattle feedstuff. If it is used as an ingredient in a commercial feed offered for sale, it requires OSIDA registration.

Other methods for litter disposal may be specifically approved by the Board of

Agriculture (including use in dead-bird composters).

CARCASSES MAY BE DISPOSED BY THE CURRENT APPROVED METHODS:

1. Disposal Pits

Disposal pits are underground structures with minimum dimensions of 4' deep x 3' wide. They must be covered with wood, metal or concrete to seal out water and varmints. Drop holes must be present with lids heavy enough to exclude varmints. The Act calls for prior approval for pit locations and construction. The local USDA-NRCS office may provide the necessary technical assistance and will determine the feasibility of a disposal pit based primarily on soil type and terrain. Much of Oklahoma soil is considered too poorly drained to warrant a disposal pit; however, one meeting the specifications set forth by the NRCS for location, construction, and soil type will receive Board of Agriculture approval.

The safety and functional benefits of pit disposal of poultry carcasses is currently under much scrutiny due to the potential ground water threat created by the presence of animal carcasses underground. This trend in disposal pit regulation should be considered when determining which disposal method to choose.

During periods of major disease outbreaks or in an emergency situation the "Board" may approve the use of pits for large quantities of dead birds. Basically, this would be a 4 foot deep trench that is covered with lime and soil on a daily basis.

2. Rendering

This disposal method requires cooking and processing the carcass to destroy any potential pathogens and then to produce a

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specific new product. Rendered poultry carcasses can then be used as a protein supplement in other livestock, poultry, or pet feeds. This method is commonly used for mortalities from company-owned farms where the rendering facilities are currently in use and where quantities of dead birds make trucking more feasible. Contract growers may find difficulty in locating a rendering plant willing to accept poultry mortalities due to the inconsistent quantity and quality of the dead bird and the disease risks associated with transporting dead poultry. Also, the quantity of feathers associated with rendered poultry create special handling and storage requirements for the rendered product. Many existing rendering companies in Oklahoma refuse to pick up any quantity of poultry carcasses because of these special handling requirements.

Rules governing the feeding of poultry carcasses to swine are set forth in the Federal Swine Health Act. Due to potential health risks to both swine and humans, raw poultry can not be fed to swine without proper cooking. This law is regulated by the USDA-Animal and Plant Health Inspection Services and requires cooking of carcasses at 212°F (boiling) for at least 30 minutes.

3. Incineration

This method of disposal requires a controlled burn for the purpose of reducing the carcass to ash. The Oklahoma State Department of Health currently must approve the design and use of an incinerator for dead bird disposal. In order to be approved for dead bird disposal an installation permit is required by the Department of Health for fuel burning equipment. Pre-site approval for mortality incinerators must also be obtained from the

Oklahoma Department of Health. A permit for construction and operation is then required. This permit has a cost from \$300.00 to \$3,500.00 depending upon the amount of emission expected from the incineration.

Incinerators must be tested through federal testing regulation and meet certain minimum emission standards as set forth in the Oklahoma Clean Air Act. Incinerators must also meet certain construction criteria such as; a minimum primary chamber temperature of 800°F and an afterburner type mechanism. The testing procedure, called stack tests, must measure several emissions including nitrogen dioxides, sulfur dioxide, carbon monoxide and particulate matter. These tests are usually conducted by the manufacturer of the incinerator. A person considering this method of disposal should check for compliance with the Oklahoma Clean Air Act before purchasing an incinerator.

4. Composting

This form of poultry mortality disposal is the latest approved by the Board as meeting the requirements of the Feed Yard Act. Composting leads to the organic conversion of dead birds to a land applicable soil amendment. This is accomplished through a controlled mixture of common ingredients that leads to the growth of 'heat-loving' bacteria which cause the mixture to 'heat-up' and accelerate the decomposition of the poultry carcasses. Current research indicates that the composting process will destroy any disease-causing organisms present in the poultry carcasses. The OSDA considers dead bird composting a "Best Management Practice".

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Poultry Waste Handling

Dead-bird composters must meet several criteria in order to be approved by the Board:

1. Composters must be properly sized based on farm capacity and normal mortality rates.

2. Construction of the facility must allow all-weather operation. It must have an impervious weight bearing foundation (preferably concrete) to prevent contamination of surrounding area. The construction materials should be pressure-treated lumber or some other rot-resistant material.

3. The location of the composter facility should be near at the source of birds with consideration to neighbors, prevailing winds, and runoff from outside drainage areas.

TECHNICAL ASSISTANCE

Technical assistance for the design, construction, and management of a waste handling system may be provided by the local county United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) or Cooperative Extension Service at the owner/operator's request. The current regulations became effective May 11, 1991 and outline the minimum standards for safe and effective animal waste management. Cost-share assistance is available in most counties through the USDA-Consolidated Farm Services Agency (formerly called Agriculture Stabilization and Conservation Service) for construction of waste management facilities by local owners and operators.

The NRCS can provide technical assistance on the location and construction of a dead bird composter. A composter built to NRCS specifications will meet the Pood Yard Act regulations.

For more information concerning the Oklahoma Pood Yard Act and how it

affects poultry operations, contact your local NRCS office, the Oklahoma Department of Agriculture or the Cooperative Extension Service.

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**22A. ENVIRONMENTAL FRAMEWORK AND IMPLEMENTATION
STRATEGY FOR POULTRY OPERATIONS**

**ENVIRONMENTAL FRAMEWORK AND
IMPLEMENTATION STRATEGY
FOR POULTRY OPERATIONS**

**A VOLUNTARY PROGRAM
DEVELOPED
AND
ADOPTED BY
THE POULTRY INDUSTRY**

**Adopted at the conclusion of the
December 8 - 9, 1998 Meeting of the
Poultry Industry Environmental Dialogue**

**This report is a "living" document and it is expected that members of the
Poultry Industry Environmental Dialogue participants will meet again in
18 to 24 months to assess whether any updates are needed.**

**Further, every attempt was made to avoid conflicts between this
document and the attachments; however, in the event a discrepancy or
contradiction appears between the two, this framework document
will supersede the information in the attachments.**

INTRODUCTION

Protection of the environment and in particular the protection of the nation's water quality is important to the poultry industry. As the industry has developed and grown over the last several years, the industry has recognized its role in and has taken proactive steps to protect the environment. Both the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) are encouraging a voluntary approach to handling non point source issues related to animal agriculture. The voluntary strategies outlined in this overall program will ensure that the industry is taking a lead role in promoting the protection of the environment and water quality through the implementation of Litter Management Plans.

The implementation of Litter/Manure Management Plans by all independent and contract poultry producers will ensure that the nutrient value of the poultry litter is managed in an environmental friendly fashion. It would be difficult for the poultry industry to dictate to private contract producers and farmers how they should manage the nutrients on their whole farm operation. However, it is entirely feasible for the poultry industry to accept their contribution to the overall nutrient issue through a Litter/Manure Management Plan. The development and implementation of Litter/Manure Management Plans in poultry production operations will ensure that the litter/manure is properly used on the land for its nutrient value or is transferred to an alternative use program.

The industry has instituted both company and academic research on feed formulation to ensure better utilization of the feed by the bird, encouraged and in some cases required the use of litter storage facilities and dead bird composters, the modification of watering devices in the grow out operations to eliminate liquid run off and ensure optimum litter control and the implementation of improved ventilation to reduce mortality. While these steps have been taken on a voluntary basis by the industry, the industry recognizes that additional measures need to be taken to ensure the continuation of and the enhancement of the nation's environmental protection and water quality improvement efforts. It is anticipated that the program outlined in this document will build on the existing strengths of the poultry industry and will assist in the obtainment of the national water quality goals set forth in the Clean Water Act. At the same time, it builds in the sustainability of the poultry industry.

The poultry industry is like a three legged stool made up of the companies, the individual producer and the American grain farmer. Each is dependent on the other. The strategies outlined in this document focus the companies' technical and financial assistance, in cooperation with various government and private agencies, with the environmental stewardship of the individual poultry producer and the grain farmer. It also indicated to the general public and to the government regulatory agencies that the industry has its own expectations when it comes to environmental protection.

This environmental framework and implementation strategy for poultry operations is a voluntary program. It is not designed nor intended to replace, substitute, or supersede for any local, state, or federal statutory or regulatory program. Moreover, each company must enter into contractual and other commercial relationships independently. Companies may not agree upon individual contractual terms, nor may any industry association require that companies incorporate or implement any of the specific recommendations embodied in this voluntary program.

Poultry litter/manure are excellent sources of organic nutrients and can be incorporated into most farming operations when properly managed. For poultry producers, the proper management of litter/manure is a major consideration in their daily operations. Whether the material is utilized as a nutrient source on land controlled by the producer, or it is provided as a nutrient source on other lands or is offered as a material in an alternative use process, the proper management of the litter/manure is essential. Storage, transportation, application, disease prevention and proper documentation are just a few of the items that need to be factored into the litter/manure management decision making process.

LITTER/MANURE MANAGEMENT PLAN

It shall be the policy of the poultry industry to develop producer contract language and incorporate into their company operations a Litter/Manure Management Plan. This policy is effective on the date of adoption and should apply as follows:

1. All new producers that are brought into a company's live production program, after the adoption date of this policy, should have a Litter Management Plan in place prior to the placement of birds. This includes producers who change integrators.
2. Should a producer add capacity, the Litter/Manure Management Plan should be modified prior to the placement of additional birds.
3. All existing producers within the company's live production program should be on the following recommended implementation schedule, or as soon as existing long-term arrangements can be modified.
 - producers signed after January 1, 1993 and before adoption date of the policy should have a Litter/Manure Management Plan by January 1, 2001
 - producers signed after January 1, 1988 and before December 31, 1992 should have a Litter/Manure Management Plan by January 1, 2003
 - producers signed after January 1, 1983 and before December 31, 1987 should have a Litter Management Plan by January 1, 2005
 - producers signed before December 31, 1982 should have a Litter/Manure Management Plan by January 1, 2008.
4. All company owned operations should have a Litter/Manure Management Plan by January 1, 2001.

It is the intent of the Litter Management Plan to address the nutrient value of the litter/manure produced in the poultry operation and to effectively plan for its use. The Litter/Manure Management Plan should be designed, written and implemented as either a component of or within an approved Nutrient Management Plan meeting or exceeding NRCS standards or as a stand alone document that utilizes third party land application or alternative use programs.

Proper litter/manure management is an essential component of a successful poultry operation. Many elements make up a Litter/Manure Management Plan. Elements that should be included in a Litter/Manure Management Plan are:

Proper storage

- * length of time
- * facility
- * siting of storage facility

Record keeping

- * amount of litter
- * clean out time/schedule
- * third party land application agreements if applicable
- * alternative use agreements if applicable
 - * name of alternative facility
 - * location of alternative facility
 - * type of alternative use
- * land application amounts; fields applied to; when applied; crop grown; crop yield

Mortality plan

- * composting facility or other legally approved disposal method
- * catastrophic die off plan
- * incorporation of mortality into land application or alternative use plan

Nutrient value for land application

- * time of sampling
- * nutrient value for nitrogen; nutrient value for phosphorus
- * soil testing values

Transportation

Notification

Proper Storage

At the time litter/manure clean out is conducted, the litter/manure is often required to be placed in storage. While litter storage does present an additional expense, it is a useful tool in a comprehensive Litter/Manure Management Plan. Litter/Manure storage facilities can be divided into two basic categories, temporary structures and permanent structures. It is desirable to have a permanent structure for litter/manure storage.

Whether the structure is temporary or permanent, the siting of the facility is important. The following general guidelines should be implemented in siting and construction of a litter storage facility:

- * easy access and terrain that keeps site grading to a minimum

- a 100 foot buffer strip should be maintained from wet areas, drainage ditches, streams, rivers, ponds, lakes or other surface water bodies
- permanent structures should have a base or floor of concrete or impermeable clay
- permanent structures should be designed in accordance with the USDA NRCS guidelines or the equivalent
- temporary storage should be covered with plastic or similar material to prevent runoff

Litter stored for a period of three months or longer should be kept in a permanent storage facility. Litter that is utilized in a land application program and is applied directly from a poultry production house during a clean out operation does not have to have storage capabilities.

Record keeping

Record keeping is an essential and a critical part of a well run Litter/Manure Management Plan. Accurate records are important as a tool in the development of future plans and assist in demonstrating the effectiveness of the plan. Records should be maintained for at least three years. Records should be kept at the farm site.

Records should be maintained in the following areas:

- * amount of litter produced/stored
- * clean out time/schedule
- * third party land application agreements if applicable
- * alternative use agreements if applicable
 - * amount of litter/manure shipped to the alternative use program
 - * the name of the alternative use program
 - * the location of the alternative use program
 - * the type of alternative use
- * land application
 - * soil test results
 - * amount/rate of manure applied
 - * fields applied to
 - * when applied
 - * crop grown
 - * crop yield (where applicable)

Examples of Record keeping documents are provided as a reference. Exact copies of these example record keeping forms are not required to meet the record keeping portion of a Litter/Manure Management Plan.

Mortality Plan

Proper management of mortality is a routine component of poultry production. Effective mortality management assists in disease prevention, nutrient management and environment control. The use

of composting, rendering or incineration or other methods that are legally approved are acceptable methods of normal mortality management. Catastrophic mortality may be handled by one of these methods or with burial that meets all federal, state and local regulations. However, dead bird burial for normal mortality should be eliminated by January 1, 2002. Any mortality plan should be incorporated in the overall Litter Management Plan.

Nutrient Value of the Litter

Litter/manure should be sampled for its nutrient value. Sampling of litter should occur no greater than 90 days prior to land application. The nutrients of principle concern are nitrogen and phosphorous. This is especially critical for any land application litter management program. Records should be kept of all nutrient tests, including date of test, type of litter sampled and the nutrient value of the litter/manure.

Transportation

When transporting litter/manure to an alternative use location, to a land application site or to any other location using the public roads, trucks or other vehicles shall be covered and/or be contained well enough to prevent loss of material.

Notification

Prior to the implementation of a litter/manure management plan, the producer shall notify the appropriate State Agency that a litter/manure management plan has been developed and will be implemented.

ALTERNATIVE USE

It shall be the policy of the poultry industry to investigate and implement, where feasible, economically sensible alternative uses for litter other than direct land application of litter/manure for its nutrient value. Companies may engage in individual research, facilitate academic research, fund entrepreneurial enterprises or enter into joint venture or other business partnerships.

Goals of any alternative use program should include:

- economically sound business principles
- financial incentive for individual producers to participate
- sound environmental uses

The use of poultry litter/manure as a direct source of nutrients in an agricultural setting is an excellent method of recycling nutrients back through the crop or animal production chain.

However, there are some lands which cannot responsibly receive poultry litter due to existing high levels of nutrients. The nutrients of concern are primarily nitrogen and phosphorous. Economically sound alternative uses of poultry litter/manure need to be implemented. These alternative use programs can be established on a regional basis, a statewide basis or at the individual company level.

It is critical to note that the issue of alternative uses of poultry litter/manure does not fundamentally change the issue of nutrients or pollution. To date, any alternative use program merely changes the form and the environmental media in which the nutrients need to be dealt with. Both nutrients of concern, nitrogen and phosphorous are elemental and cannot be destroyed. Changing the form of the nutrients may allow for more feasible uses such as golf courses, landscaping areas, energy production and nutrient recovery.

In the case of burning litter from poultry operations for BTU value and generating electrical power or steam, the residual ash contains highly concentrated levels of elemental phosphorous. Emissions from the burning process could also contain elevated levels of NO_x, a leading contributor to air pollution. Even if the NO_x is "scrubbed" out of the emissions, the nitrogen is contained in the waste water stream of the air control equipment. The use of poultry litter as a fuel source in electrical generation is an extremely capital intensive alternative use method.

Two other often suggested alternative uses of broiler litter are composting and pelletization. Both of these methods still rely on the litter for its nutrient value. Whether the compost is used in organic farming or as a soil amendment in garden soils, the nutrients go back on the land. Whether the pelletized litter is used as a fertilizer source in growing grain crops or in landscaping, the nutrients go back on the land. In either case, the effective management of the elemental nutrients is essential.

FEED FORMULATION AND NUTRIENT REDUCTION

It shall be the policy of the poultry industry to engage in, facilitate, or in some other fashion, research and where economically feasible and without any detriment to the health of the bird or to the bird to effectively metabolize the feed formulation, implement nutrient reduction strategies in feed formulation. This can be accomplished by the addition of enzymes, reduction in nutrient concentrations, modifications in existing formulations or by any other reasonable method.

In a effort to quantify the effectiveness of this nutrient reduction strategy, the industry shall establish a baseline measurement of nutrients in feed stocks. On an annual basis, until January 1, 2005, the industry will measure the reduction of nutrient levels in feed produced. This information shall be reported in a unified national report submitted to the US Environmental Protection Agency, Assistant Administrator, Office of Water.

EDUCATION

It shall be the policy of the poultry industry to aggressively facilitate the education of producers, service personnel, other segments of the poultry industry, government regulators, and the general public on the environmental issues related to poultry production and processing. This education should include the value of poultry litter/manure and mortality and their proper management and their impact on the environment. Education and training are also considered to include innovative technology transfer, and research outreach programs.

The industry can implement this strategy through broad based interaction with the state land grant universities, other institutions of higher learning, government agencies (USDA Resource Conservation Service), poultry associations and public service announcements.

FINANCIAL

Implementation of any new program, either voluntary or regulatory, will require additional funding. The poultry industry has historically used several avenues, both private and public, to finance the implementation of new programs. This environmental framework and strategy is no different.

Public Funding

Producers will continue to utilize, to the fullest extent possible, the federal and state cost share funding programs for water quality Litter/Manure Management Practices.

USDA will continue its support for and more favorably, increase its support and request additional funds under the Environmental Quality Incentive Program (EQUIP), the Conservation Reserve Program (CRP), and the Small Watershed Protection Program (PL 83-566).

The poultry industry fully supports the President's Clean Water Action Plan as it relates to funding of capital improvements needed by producers to implement water quality related litter/manure management practices.

EPA should, at a minimum, continue its support for and more favorably, increase its support and request additional funds under the Clean Water Act 319 Program (Not point Source Management Program) and the Clean Water Act Waste Water Treatment and Drinking Water State Revolving Funds (SRF).

EPA should encourage the States to evaluate the use of state funds, both matching and non-matching, to redirect state spending to agricultural non point source efforts.

All interested parties should be seeking additional funds to support poultry industry environmental management efforts, including efforts to remove barriers in Federal and state legislation to allow use of available funds for construction of needed facilities, use of Transportation Department buffer and wetland conservation funds, and other funds that may be available to meet environmental objectives.

Private Funding

Integrators will continue to fund projects through their traditional channels and will increase funding as needed to meet the national goals of water quality improvement and protection. Avenues of funding available to the integrators include, but are not limited to:

- direct payments to the producers through the standard payment channels

match

- funding research programs to investigate and implement nutrient reduction in feed formulations
- funding nutrient management and best management educational programs for the producers
- funding local and regional education, research and technical assistance programs

COMPLIANCE ASSURANCE

A voluntary program needs to have a strong component of compliance assurance. To the extent industry has committed to have each producer and company owned operation operate under a Litter/Manure Management Plan, it is incumbent on the industry, both the integrators and the individual producers, to do their part in compliance assurance.

Under this voluntary framework and implementation strategy, there are three components to compliance assurance. Each must function to have a successful program.

Producer

Each producer should have a Litter/Manure Management Plan, in accordance with the time schedule noted above in the section, titled: "Litter/Manure Management Plan."

Each producer should report, on an annual basis, to the appropriate state agency:

- the amount of litter/manure removed from the growing houses
- the amount of litter/manure land applied for nutrient value
- the amount of litter/manure transferred for alternative uses

Poultry Integrators

Each integrator should facilitate the education and training of their grow out personnel, producer service personnel or any other integrator employee that interacts on the farm with the producer, in the principles of litter management.

The integrator service personnel should request to verify if each producer has the required Litter/Manure Management Plan and that the producer has submitted an annual report to the appropriate state agency.

The integrator should report, for each of the integrator owned operations, on an annual basis, to the appropriate state agency:

- the amount of litter/manure removed from the growing houses
- the amount of litter/manure land applied for nutrient value
- the amount of litter/manure transferred for alternative uses

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Regulatory Agencies

The regulatory agencies reserve the right to inspect the producer's Litter Management Plan and any records relating to the Plan during reasonable and routine business times and within the scope of the agency's statutory authority.

The regulatory agencies reserve the right to investigate any and all complaints related to the producer's operation or the integrator's operation within the agency's statutory authority.

Attachments

- A. Report of the Location and Siting Workgroup.
- B. Report of the Litter/Manure and By-Products Management Workgroup.
- C. Report of the Wet Processing Workgroup.
- D. Report of the Alternative Use Workgroup.
- E. Report of the Education, Training and Communications Workgroup.
- F. Report of the Research and Innovative Technologies Workgroup.

**Questions about this document may be directed to
the National Chicken Council at 202-296-2622**

23. HOUSE AND EQUIPMENT REQUIREMENTS

(Houses completed from January 1, 1984 to December 31, 1993)

A. House Requirements

1. House construction must have been completed January 1, 1984 or after.
2. The dimensions of the house will be 40 feet by 400 feet long.
3. The house must lay on an east-west axis.
4. Houses will be clear-span, steel construction with six (6) feet side-walls. The side-walls will be insulated two (2) feet up from the bottom of the truss.
5. Insulation in the roof must be (1½) one and one-half inch Styrofoam or one inch Thermax. Side-wall and end-wall insulation must be one inch of Styrofoam or one inch of Thermax covered with wood on the inside and sheet metal on the outside.
6. Footing specifications must be:
 - a. 9" inches wide.
 - b. 12" inches above ground level.
 - c. 8" inches below ground level. With a 9 x 18" inch pier hole under each truss, which would be equal to 38" inches from top of form to bottom of pier hole, or one (1) 12" inch bucket scoop under each truss, 8" inches' deep and 20" inches long.
7. A level loading area, well graveled and maintained is necessary. The area must extend 60 feet in front of the house.

B. Equipment Requirements

1. Feeders: Automatic, pan-type, two lines with four pans per ten feet section of feeder. Feed lines will have automatic cut-off pans at one-third house and one-half house partitions to facilitate brooding. Each pan will have a minimum of 132 square inches of available feed space.

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2. **Waterers:** Four lines of continuous cup-type drinkers on thirty inch centers in the one-third house brood area. Three lines of continuous cup-type drinkers on thirty inch centers in the remaining two-thirds of the house plumbed with adequate cut-offs and drains for freeze protection, and medicator/vaccinator hook-up.
3. **Ventilation:** In a 400 foot house three 36 inch fans mounted in the north side for exhausting and hinged to open for summer ventilation. Eight 36 inch fans on winches down the center of house for winter circulation and summer ventilation. All fans must be controlled by timers and thermostats. One fan per 50 linear feet of building is required.
4. **Bulk feed Bins:** Feed capacity must equal one and one-quarter pounds per bird based on .8 square feet per bird. Two bins per house are required.
5. **Brooders:** A minimum of 40 BTUS per bird is required. One brooder per 1500 birds situated in two lines near the side-walls is required in the brooding area (one-third of the house).
6. **Lights:** One row of lights down the center of the house spaced on twenty foot centers. Sixty watt incandescent or nine watt florescent must be used.
7. **Curtains:** North and south side-wall curtains will be of black material with eighteen inches of clear material on the top.
8. **Curtain Machines:** curtains will be controlled by an A.C. machine on the north side of the house and an A.C./D.C. machine on the south side of the house.
9. **Dead Bird Disposal:** Dead birds will be disposed of in a pit constructed in accordance with instructions issued by the state agencies.
10. A divider curtain at one-third and one-half house is required.
11. Permanently installed foggers with nozzles, filter, solenoid valve, pressure pump, and thermostat.
12. Any deviation from building and equipment requirements must be approved in writing by Serviceman, Broiler Manager, and the Production Manager.

Note: Any equipment upgrades such as nipple waterers, additional fans, high pressure foggers, etc. are approved.

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House and Equipment Requirements (Built before Dec. 31, 1993) 23-2

HOUSE AND EQUIPMENT REQUIREMENTS

(Houses completed January 1, 1994 or after)

A. House Requirements:

1. House construction must have been completed January 1, 1994 or after.
2. The dimensions of the house will be 40 feet wide by 400 feet long.
3. The house must lay on an east-west axis.
4. Houses will be clear-span, steel truss construction with seven (7) feet side-walls. The side-walls will be insulated two (2) feet up from the bottom of the truss.
5. Insulation in the roof must be (1 ½) one and one-half inch Styrofoam. Side-wall and end-wall insulation must be one inch of Styrofoam covered with wood on the inside and sheet metal on the outside.
6. Footing specifications must be:
 - a. 9" inches wide.
 - b. 12" inches above ground level.
 - c. 8" inches below ground level with a 9 x 18" inch pier hole under each truss, which would be equal to 38" inches from top of form to bottom of pier hole, or one (1) 12" inch bucket scoop under each truss, 8" inches deep and 20" inches long.
7. A level loading area, well graveled and maintained is necessary. The area must extend 60 feet in front of the house.
8. Electrical wires to the house will be underground from a meter loop pole located well away from any truck traffic.

B. Equipment Requirements:

1. Feeders: Automatic, pan-type, two lines with four pans per ten feet section of feeder. Feed lines will have automatic shut-off pans at one-third house and two-thirds house partitions to facilitate brooding.

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2. **Waters:** Four lines of continuous nipple drinkers throughout the house spaced according to manufacturers' recommendation, plumbed with adequate cut-offs and drains for freeze protection, and medicator/vaccinator hook-up.
3. **Ventilation:** In a 400 foot house four 36 inch fans mounted in the north side for exhausting and hinged to open for summer ventilation. Sixteen (16) 36 inch fans in two lines on winches down the center of house for winter circulation and summer ventilation. Twenty (20) vent boards' 6" x 48" spaced evenly in the top board of the south sidewall are required. All fans must be controlled by timers and thermostats. Two fans per 50 linear feet of building are required.
4. **Bulk Feed Bins:** Feed capacity must equal one and one-quarter pound per bird bases on .8 square feet per bird. Two bins per house are required, with separate fill systems.
5. **Brooders:** Thirty-eight (38) Jet-type brooders on three zone controls with battery back-up, in two lines near the sidewalls is required.
6. **Lights:** One row of light down the center of the house spaced on twenty foot centers. Sixty-watt incandescent or nine-watt fluorescent must be used.
7. **Curtains:** North and south side-wall curtains will be of black material with adequate clear material on the top to allow 6 inches of light when curtain is completely closed. Curtain must overlap the freeze board at least 5 inches.
8. **Curtain Machines:** Curtains will be controlled by an A.C. machine on the north side of the house and an A.C./D.C. machine on the south side of the house.
9. **Dead Bird Disposal:** Dead birds will be disposed of in accordance with instructions issued by the Federal, State and local agencies.
10. A divider curtain and five 2' x 8' plywood divider boards at one-third and two-third house are required.
11. Permanently installed foggers with stainless steel nozzles, filter, two solenoid valves, 200 PSI pressure pump and two thermostats.
12. Any deviation from building and equipment requirements must be approved in writing by Serviceman, Broiler Manager, and the Production Manager.

HOUSE AND EQUIPMENT REQUIREMENTS

(Houses completed October 1, 1996 or after)

A. House Requirements:

1. House construction must have been completed October 1, 1996 or after.
2. The dimensions of the house will be 40 feet wide and may be 400 feet, 450 feet or 500 feet long.
3. The house must lay on an east-west axis.
4. Houses will be clear-span, steel truss construction with seven (7) feet side-walls. The side-walls will be insulated two (2) feet up from the bottom of the truss.
5. Insulation in the roof must be (1 ½) one and one-half inch Styrofoam. Side-wall and end-wall insulation must be one inch of Styrofoam covered with wood on the inside and sheet metal on the outside.
6. Footing specifications must be:
 - a. 9" inches wide.
 - b. 12" inches above ground level.
 - c. 8" inches below ground level with a 9 x 18" inch pier hole under each truss, which would be equal to 38" inches from top of form to bottom of pier hole, or one (1) 12" inch bucket scoop under each truss, 8" inches deep and 20" inches long.
7. A level loading area, well graveled and maintained is necessary. The area must extend 60 feet in front of the house.
8. Electrical wires to the house will be underground from a meter loop pole located well away from any truck traffic.

B. Equipment Requirements:

1. Feeders: Automatic, pan-type, two lines with four pans per ten feet section of feeder. Feed lines will have automatic shut-off pans at one-third house and two-thirds house partitions to facilitate brooding.

2. Waters: Four lines of continuous nipple drinkers throughout the house spaced according to manufacturers' recommendation, plumbed with adequate cut-offs and drains for freeze protection, and medicator/vaccinator hook-up.
3. Ventilation: In a 400 foot broiler house, four 36 inch fans should be mounted in the north side wall for exhausting. They should be hinged to open for summer ventilation. There should be five fans for a 450 foot broiler house and six fans for a 500 foot broiler house. Two 36 inch fans per 50 feet of house length, winched in two lines down the center of house are required, for winter circulation and summer ventilation. Vent boards every 20 feet, 6" x 48" spaced evenly in the top board of the south sidewall are required. All fans must be controlled by five minute timers and thermostats. Tunnel ventilation fans must be sized according to manufacturer's recommendations. Air baffles must be installed every 50 linear feet.
4. Bulk Feed Bins: Feed capacity must equal one and one-quarter pound per bird bases on .8 square feet per bird. Two bins per house are required, with separate fill systems.
5. Install one jet-type brooder per 500 chicks. Three zone controls with battery back-up, in two lines near the sidewalls is required. Make-up heaters of equivalent BTU rating may be used in two-thirds house and full house provided a stand-by generator is available.
6. Lights: One row of light down the center of the house spaced on twenty foot centers. Sixty-watt incandescent or nine-watt fluorescent must be used.
7. Curtains: North and south side-wall curtains will be of black material with adequate clear material on the top to allow 6 inches of light when curtain is completely closed. Curtain must overlap the freeze board at least 5 inches.
8. Curtain Machines: Curtains will be controlled by an A.C. machine on the north side of the house and an A.C./D.C. machine on the south side of the house. Tunnel ventilated houses require AC/DC machines on both sides of the house.

9. Dead Bird Disposal: Dead birds will be disposed of in accordance with instructions issued by the Federal, State and local agencies.
10. A divider curtain and five 2' x 8' plywood divider boards at one-third and two-third house are required.
11. Permanently installed foggers with stainless steel nozzles, filter, two solenoid valves, 200 PSI pressure pump and two thermostats.
12. Any deviation from building and equipment requirements must be approved in writing by Serviceman, Broiler Manager, and the Production Manager.

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House and Equipment Requirements (Built after October 1, 1996)

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24. LIGHTING PROGRAM

TABLE B

BROILER

(Daylight Plus Night Lights As Shown Below)

SMALL BROILERS

DAYS AGE	HRS. LITE	ON	OFF	ON	OFF
0-3	24-(CONTINUOUS LIGHT)				
4	13	9 PM	10 PM		
14	15	9 PM	10 PM	5 AM	AT DAYLIGHT
21	17	9 PM	10 PM	3 AM	AT DAYLIGHT
28	20	9 PM	10 PM	12 M	AT DAYLIGHT
33	24-(CONTINUOUS LIGHT)				

LARGE BROILERS

DAYS AGE	HRS. LITE	ON	OFF	ON	OFF
0-3	24-(CONTINUOUS LIGHT)				
4-14	15	9 PM	10 PM		
15-21	15	9 PM	10 PM	5 AM	AT DAYLIGHT
22-28	16	9 PM	10 PM	4 AM	AT DAYLIGHT
29-35	17	9 PM	10 PM	3 AM	AT DAYLIGHT
36-42	18	9 PM	10 PM	2 AM	AT DAYLIGHT
43-49	19	9 PM	10 PM	1 AM	AT DAYLIGHT
50-Market	24-(CONTINUOUS LIGHT)				

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Lighting Program-Table B 24-1

25. VENTILATION AND TEMPERATURE TABLE

CHICK COMFORT AND HOUSE CONDITIONS MUST DETERMINE ACTUAL SETTINGS

A

VENTILATION METHOD #1								
Cold Weather Ventilation (Below 40 degrees) - CURTAINS CLOSED								
VENTILATION METHOD #2								
At 50 degrees and above, set curtain thermostats at desired house temp								
for curtain ventilation and do not turn off exhaust fans								
								7
								FAN BELTS
								BATTERY &
								LOUVERS
								CHECK
			1	2	3	4	5	8
			BROODER	EXHAUST	OVERHEAD	SOUTH	NORTH	CURTAIN
		AGE	THERMO	THERMO	THERMO	CURTAINS	CURTAINS	OPENING
T	S	1-3	90	93	93	95	98	12 IN
N	E	4-7	87	90	90	92	93	12 IN
E	T	8-11	85	88	88	90	91	12 IN
R	T	12-15	83	86	86	88	89	12 IN
M	I	16-19	80	83	83	85	86	12 IN
O	N	20-24	77	80	80	82	83	24 IN
S	O	25-28	75	78	78	79	80	24 IN
T	S	29-32	72	75	75	77	78	24 IN
A		33-MKT	72	75	75	77	78	24 IN
T								

WARNING! AMMONIA KILLS AND BLINDS CHICKENS
RUN EXHAUST FANS TO CONTROL AMMONIA

B

EXHAUST FAN TIMER SETTINGS*								
1. IF THERE IS SLIGHT AMMONIA-INCREASE 15 SECONDS.								
2. IF THERE IS STRONG AMMONIA-INCREASE 30 SECONDS.								
3. IF LITTER IS VERY DRY-DECREASE 15 SECONDS.								
4. IF LITTER IS WET-INCREASE 30 SECONDS.								
T	V	WEEKS	1	2	3	4 (VENTS)	5 EXHAUSTS	6 OVERHEAD
I	E	AGE	BELOW 20	20 TO 30	30 TO 60	**OPEN	TO RUN	TO RUN
N	N	1	1 MIN	2 MIN	2 MIN	ALL 1/3 HS	1 OR 2	1 OR 2
E	T	2	1.5 MIN	3 MIN	5 MIN	ALL 1/2 HS	2	2
R		3	2.5 MIN	5 MIN	7 MIN	ALL FULL HS	2 OR 3	4 TO 6
S	B	4	4 MIN	8 MIN	10 MIN	ALL FULL HS	3	6
	O	5	5.5 MIN	11 MIN	12 MIN	ALL FULL HS	3 OR 4	6
A	A	6	6 MIN	12 MIN	14 MIN	ALL FULL HS	3 OR 4	6
N	R							
D	D	*USE TWO FANS AND CUT TIME IN HALF OR 3 FANS AND CUT IN THIRDS,						
	S	OR 4 FANS AND CUT IN FOURTHS.						
		**SET VENT BOARDS WITH STATIC PRESSURE GAUGE.						
		SET CIRCULATION TIMER 15 SECONDS AHEAD OF EXHAUST FANS AND						
		RUN AS LONG AS EXHAUST FANS RUN.						

WARNING! A POWER FAILURE CAN SMOTHER THE ENTIRE HOUSE OF CHICKENS! CHECK EMERGENCY VENTILATION REGULARLY.

